



Radford Army Ammunition Plant
Route 114, P.O. Box 1
Radford, VA 24143-0100
USA

October 22, 2007

Mr. William Geiger
RCRA General Operations Branch, Mail Code: 3WC23
Waste and Chemicals Management Division
U. S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Mr. James L. Cutler, Jr.
Virginia Department of Environmental Quality
629 East Main Street
Richmond, VA 24143-0100


Subject: With Certification, Decision Documents for SWMU 46: Propellant Burial Area, SWMU 68: Chromic Acid Treatment Tanks, SWMU 69: Pond by Chromic Acid Treatment Tanks, SWMU 75 Used Oil Storage Tank (Inert Gas Plant), SWMU 76: Oil Tanks, AOC F: Former Drum Storage Area, No Further Action, August 2007
Radford Army Ammunition Plant Installation Action Plan
EPA ID# VA1 210020730

Dear Mr. Geiger and Mr Cutler:

Enclosed is the certification for the subject documents that was sent to you on October 11, 2007.

Please coordinate with and provide any questions or comments to myself at (540) 639-8658, Jerry Redder of my staff (540) 639-7536 or Jim McKenna, ACO Staff (540) 639-8641.

Sincerely,


P.W. Holt, Environmental Manager
Alliant Techsystems Inc.

c: Durwood Willis
Virginia Department of Environmental Quality
P. O. Box 10009
Richmond, VA 23240-0009

E. A. Lohman
Virginia Department of Environmental Quality
West Central Regional Office
3019 Peters Creek Road
Roanoke, VA 24019


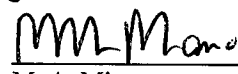
Rich Mendoza
U.S. Army Environmental Command
1 Rock Island Arsenal
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IMAE-CDN
Rock Island, Illinois 61299

Dennis Druck
U.S. Army Center for Health Promotion and Preventive Medicine
5158 Blackhawk Road, Attn: MCHB-TS-REH
Aberdeen Proving Ground, MD 21010-5403

Tom Meyer
Corps of Engineers, Baltimore District
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Baltimore, MD 21201

bc: Administrative File
J. McKenna, ACO Staff
Rob Davie-ACO Staff
M.A. Miano
P.W. Holt
J. J. Redder
Env. File

Coordination:


J. McKenna

M. A. Miano

Concerning the following:

Decision Documents

for

SWMU 46: Propellant Burial Area, SWMU 68: Chromic Acid Treatment Tanks, SWMU 69: Pond
by Chromic Acid Treatment Tanks, SWMU 75 Used Oil Storage Tank (Inert Gas Plant),

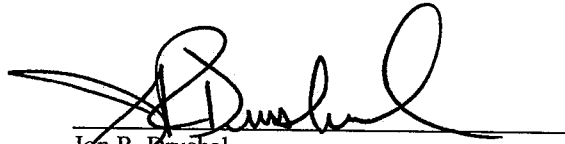
SWMU 76: Oil Tanks, AOC F: Former Drum Storage Area

No Further Action, August 2007


Radford Army Ammunition Plant

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

SIGNATURE:
PRINTED NAME:
TITLE:


Jon R. Drushal
Lieutenant Colonel, US Army
Commanding

SIGNATURE:
PRINTED NAME:
TITLE:


Kent Holiday
Vice President and General Manager
ATK Energetics Systems Division



Radford Army Ammunition Plant
Route 114, P.O. Box 1
Radford, VA 24143-0100
USA

October 18, 2007

Mr. William Geiger
RCRA General Operations Branch, Mail Code: 3WC23
Waste and Chemicals Management Division
U. S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Mr. James L. Cutler, Jr.
Virginia Department of Environmental Quality
629 East Main Street
Richmond, VA 24143-0100

Subject: Decision Documents for SWMU 46: Propellant Burial Area, SWMU 68: Chromic Acid Treatment Tanks, SWMU 69: Pond by Chromic Acid Treatment Tanks, SWMU 75 Used Oil Storage Tank (Inert Gas Plant), SWMU 76: Oil Tanks, AOC F: Former Drum Storage Area, No Further Action, August 2007
Radford Army Ammunition Plant Installation Action Plan
EPA ID# VA1 210020730

Dear Mr. Geiger and Mr. Cutler

Enclosed is one copy of the subject documents. The certification will be sent under separate cover. Also under separate cover one electronic copy will be sent to the distribution below.

Please coordinate with and provide any questions or comments to myself at (540) 639-8658, Jerry Redder of my staff (540) 639-7536 or Jim McKenna, ACO Staff (540) 639-8641.

Sincerely,


P.W. Holt, Environmental Manager
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Virginia Department of Environmental Quality
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J. McKenna, ACO Staff
Rob Davie-ACO Staff
P.W. Holt
J. J. Redder
Env. File

Coordination:


J. McKenna

RADFORD ARMY AMMUNITION PLANT, VIRGINIA

Decision Document

**SWMU 46: Propellant Burial Area
No Further Action**

August 2007

**SWMU 46
DECISION DOCUMENT
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1.0 PURPOSE

This Decision Document (DD) is prepared in accordance with the Assistant Chief of Staff for Installation Management (ACSIM) memorandum (ACSIM 2003) detailing policies for staffing and approving DDs, Defense Environmental Restoration Program (DERP) management guidance (DERP 2001), and the Radford Army Ammunition Plant (RFAAP) Resource Conservation and Recovery Act (RCRA) Permit, Part II section D (4) (USEPA 2000) (EPA ID No. VA1210020730).

This DD describes the selection of No Further Action for Solid Waste Management Unit (SWMU) 46 - the "Propellant Burial Area." No Further Action was selected based upon a Site Screening in accordance with the 1976 RCRA, the Hazardous and Solid Waste Amendments of 1984 (HSWA), the RFAAP RCRA Permit requirements (USEPA 2000), and the Final RCRA Corrective Action Plan (USEPA 1994), as applicable.

This task effort was performed in accordance with Work Plan Addendum (WPA) No. 16 (URS 2003a), which incorporated by reference, the elements of the RFAAP Master Work Plan (MWP; URS 2003b).

RFAAP conducted a RCRA Site Screening Process (SSP) for SWMU 46 (URS 2007) that was designed to assess whether releases of hazardous substances, pollutants, contaminants, hazardous wastes, or hazardous constituents have occurred to the environment at the sites evaluated, whether further investigation (i.e., risk assessment or RCRA Facility Investigation (RFI)) or an interim removal action is appropriate at a site, or whether No Further Action is appropriate.

2.0 BACKGROUND INFORMATION

SWMU 46 is an enclosed depression located in the northwest section of the MMA approximately 240 ft southeast of the New River. Approximately one ton of propellants and propellant-contaminated soil was reportedly buried at this location as the result of a railcar spill. Other activities have not been associated with the SWMU 46 area.

As part of the SSP investigation, six soil samples were collected from two boring locations and analyzed for target compound list (TCL) volatile organic compounds, TCL semi-volatile organic compounds, polynuclear aromatic hydrocarbons, explosives (including nitroglycerin and pentaerythritol tetranitrate (PETN)), and target analyte list inorganics. A selected surface soil sample was also analyzed for TCL pesticides, TCL polychlorinated biphenyls, and herbicides. Explosives were not detected in the six samples. The site passed the residential and industrial cumulative risk screening, lead exposure assessment, iron "margin of exposure" assessment and screening level ecological risk assessment. One chemical in soil, trichloroethene (TCE), exceeded its calculated site-specific soil screening level for the soil-to-groundwater pathway; therefore, one monitoring well was installed to evaluate potential leaching of TCE to groundwater. Evaluation of the soil-to-groundwater migration pathway for TCE and related degradation products did not indicate detectable concentrations of these VOCs in groundwater. SWMU 46 passed the SSP (URS 2007) resulting in a recommendation of no further action. The SSP (URS 2007) was subsequently approved by the Environmental Protection Agency, Region III on June 7, 2007, and the Virginia Department of Environmental Quality on April 13, 2007.

3.0 COMMUNITY RELATIONS RESPONSIVENESS SUMMARY

A community relations plan has been developed for RFAAP that establishes an effective program to inform the community of the RFAAP Installation Restoration Program (IRP) and provide for early and continuous community involvement in the cleanup process. RFAAP has made a commitment to keep citizens informed and give communities a role in environmental cleanup decisions. RFAAP disseminates information on

environmental restoration activities, provides opportunities for comment, and seeks public participation on the IRP Restoration Advisory Board (RAB).


RFAAP and local citizens formed a RAB to provide information and solicit comments and concerns regarding site cleanup activities. The RAB includes members of the local community, representatives from USEPA and Virginia Department of Environmental Quality, and the U.S. Army Environmental Restoration RFAAP Program Manager.

4.0 SUMMARY AND CONCLUSIONS


Due to lacking evidence of propellant disposal or release based on both SSP and previous investigation results and the site passing the screening process, no further action at SWMU 46 is recommended.

5.0 APPROVAL AND SIGNATURE


Approved By:


James J. McKenna
Restoration Program Manager
Radford AAP

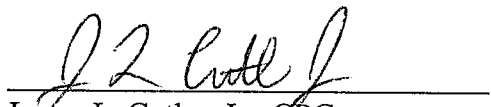
21 Aug 2007
Date


P.W. Holt
Environmental Manager
Alliant Techsystems, Inc.

8/22/07
Date


William Geiger
RCRA Project Manager
USEPA Region III

9/21/07
Date


James L. Cutler, Jr., CPG
Federal Facilities Project Manager
Virginia DEQ

10/1/07
Date

6.0 REFERENCES

- Assistant Chief of Staff for Installation Management (ACSIM). 2003. Memorandum from Major General Larry J. Lust: Policies for Staffing and Approving Decision Documents (DDs), dated 09 September 2003.
- Defense Environmental Restoration Program (DERP). 2001. Memorandum for Assistant Secretary of the Army: Management Guidance for the Defense Environmental Restoration Program, dated 28 September 2001.
- URS Group, Inc. (URS). 2003a. Work Plan Addendum No. 16, Site Screening Process for Solid Waste Management Units 13, 37, 38, 46, 57, 68, 69, 75, 76, and Areas of Concern A, F, and Q. Prepared for USACE Baltimore District. August 2003.
- URS Group, Inc. (URS). 2003b. Master Work Plan, Quality Assurance Plan, Health and Safety Plan. Radford Army Ammunition Plant, Radford, Virginia. Prepared for U.S. Army Corps of Engineers, Baltimore District. August 2003.
- URS Group, Inc. (URS). 2007. Site Screening Process Report at Solid Waste Management Units 13, 37, 38, 45, 57, 68, 69, and Areas of Concern A, F, and Q. Radford Army Ammunition Plant, Radford, Virginia. Prepared for U.S. Army Corps of Engineers, Baltimore District. May 2007.
- U.S. Environmental Protection Agency (USEPA). 1994. RCRA Corrective Action Plan (Final). Office of Waste Programs Enforcement, Office of Solid Waste. OSWER Directive 9902.3-2A. May 1994.
- U.S. Environmental Protection Agency (USEPA). 2000. Permit for Corrective Action and Waste Minimization: Pursuant to the Resource Conservation and Recovery Act as Amended by the Hazardous and Solid Waste Amendments of 1984, Radford Army Ammunition Plant, Radford, Virginia, VA1210020730.

RADFORD ARMY AMMUNITION PLANT, VIRGINIA

Decision Document

**SWMU 68: Chromic Acid Treatment Tanks
No Further Action**

August 2007

**SWMU 68
DECISION DOCUMENT
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1.0 PURPOSE

This Decision Document (DD) is prepared in accordance with the Assistant Chief of Staff for Installation Management (ACSIM) memorandum (ACSIM 2003) detailing policies for staffing and approving DDs, Defense Environmental Restoration Program (DERP) management guidance (DERP 2001), and the Radford Army Ammunition Plant (RFAAP) Resource Conservation and Recovery Act (RCRA) Permit, Part II section D (4) (USEPA 2000) (EPA ID No. VA1210020730).

This DD describes the selection of No Further Action for Solid Waste Management Unit (SWMU) 68 - the "Chromic Acid Treatment Tanks." No Further Action was selected based upon a Site Screening in accordance with the 1976 RCRA, the Hazardous and Solid Waste Amendments of 1984 (HSWA), the RFAAP RCRA Permit requirements (USEPA 2000), and the Final RCRA Corrective Action Plan (USEPA 1994), as applicable.

This task effort was performed in accordance with Work Plan Addendum (WPA) No. 16 (URS 2003a), which incorporated by reference, the elements of the RFAAP Master Work Plan (MWP; URS 2003b).

RFAAP conducted a RCRA Site Screening Process (SSP) for SWMU 68 (URS 2007) that was designed to assess whether releases of hazardous substances, pollutants, contaminants, hazardous wastes, or hazardous constituents have occurred to the environment at the sites evaluated, whether further investigation (i.e., risk assessment or RCRA Facility Investigation (RFI)) or an interim removal action is appropriate at a site, or whether No Further Action is appropriate.

2.0 BACKGROUND INFORMATION

SWMU 68 is 0.023-acre area located in the western section of the Horseshoe Area (HSA). Drainage from this area was engineered to flow into a former settling pond (SWMU 69). In 1958, RFAAP started reconditioning "Nike" and "Honest John" rocket motors utilizing a rinse of chromic acid with rust inhibitors (Hercules 1958). RFAAP operated a Virginia State Water Control Board-approved waste treatment plant (SWMU 68) in the Cast Propellant Area to treat chromic-acid wastewater prior to discharge to the New River (Hercules 1958, SWCB 1958). The site consisted of two 4,000-gallon aboveground, open top tanks (ASTs) with associated pumps, piping, and appurtenances. Tanks in the nearby building were used prior to 1974 to treat spent chromic acid generated from the cleaning of rocket encasements (USEPA 1987). Treated wastewater was then discharged to a 12,000-gallon settling pond (SWMU 69) where chromium-hydroxide sludge precipitated (Hercules 1958). In July 1997, the site underwent closure including removal of the two treatment ASTs, appurtenances, and impacted soil (ICF Kaiser 1998).

As part of the SSP investigation, nine soil samples were collected from three boring locations and analyzed for target compound list (TCL) volatile organic compounds, TCL semi-volatile organic compounds, polynuclear aromatic hydrocarbons, explosives (including nitroglycerin and pentaerythritol tetranitrate (PETN)), and target analyte list inorganics. A selected surface soil sample was also analyzed for TCL pesticides, TCL PCBs, and herbicides. The site passed the residential and industrial cumulative risk screening, lead exposure assessment, iron "margin of exposure" assessment, soil screening level evaluation for the soil to groundwater pathway, and screening level ecological risk assessment. SWMU 68 passed the SSP resulting in a recommendation of no further action (URS 2007). The SSP (URS 2007) was subsequently approved by the Environmental Protection Agency, Region III on June 7, 2007, and the Virginia Department of Environmental Quality on April 13, 2007.

3.0 COMMUNITY RELATIONS RESPONSIVENESS SUMMARY

A community relations plan has been developed for RFAAP that establishes an effective program to inform the community of the RFAAP Installation Restoration Program (IRP) and provide for early and continuous community involvement in the cleanup process. RFAAP has made a commitment to keep citizens informed and give communities a role in environmental cleanup decisions. RFAAP disseminates information on environmental restoration activities, provides opportunities for comment, and seeks public participation on the IRP Restoration Advisory Board (RAB).


RFAAP and local citizens formed a RAB to provide information and solicit comments and concerns regarding site cleanup activities. The RAB includes members of the local community, representatives from USEPA and Virginia Department of Environmental Quality, and the U.S. Army Environmental Restoration RFAAP Program Manager.

4.0 SUMMARY AND CONCLUSIONS

Due to the site passing the screening process, no further action at SWMU 68 is recommended.

5.0 APPROVAL AND SIGNATURE

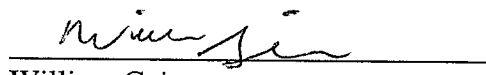
Approved By:


James J. McKenna
Restoration Program Manager
Radford AAP

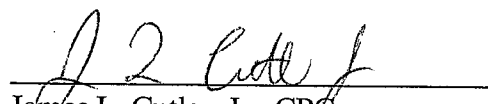
21 Aug 2007
Date


P.W. Holt
Environmental Manager
Alliant Techsystems, Inc.

9/5/07
Date


William Geiger
RCRA Project Manager
USEPA Region III

9/21/07
Date


James L. Cutler, Jr., CPG
Federal Facilities Project Manager
Virginia DEQ

10/1/07
Date

6.0 REFERENCES

- Assistant Chief of Staff for Installation Management (ACSIM). 2003. Memorandum from Major General Larry J. Lust: Policies for Staffing and Approving Decision Documents (DDs), dated 09 September 2003.
- Defense Environmental Restoration Program (DERP). 2001. Memorandum for Assistant Secretary of the Army: Management Guidance for the Defense Environmental Restoration Program, dated 28 September 2001.
- Hercules Powder Company, Inc. (Hercules). 1958. Letter to the Virginia State Water Control Board for application for a permit to discharge treated industrial wastes resulting from waste water treatment facilities (SWMU 68/69). March 14, 1958.
- ICF Kaiser Engineers, Inc. (ICF Kaiser). 1998. *SMWU 68 Closure Report, Radford Army Ammunition Plant*. Prepared for U.S. Army Environmental Center.
- URS Group, Inc. (URS). 2003a. Work Plan Addendum No. 16, Site Screening Process for Solid Waste Management Units 13, 37, 38, 46, 57, 68, 69, 75, 76, and Areas of Concern A, F, and Q. Prepared for USACE Baltimore District. August 2003.
- URS Group, Inc. (URS). 2003b. Master Work Plan, Quality Assurance Plan, Health and Safety Plan. Radford Army Ammunition Plant, Radford, Virginia. Prepared for U.S. Army Corps of Engineers, Baltimore District. August 2003.
- URS Group, Inc. (URS). 2007. Site Screening Process Report at Solid Waste Management Units 13, 37, 38, 45, 57, 68, 69, and Areas of Concern A, F, and Q. Radford Army Ammunition Plant, Radford, Virginia. Prepared for U.S. Army Corps of Engineers, Baltimore District. May 2007.
- U.S. Environmental Protection Agency (USEPA). 1987. *RCRA Facility Assessment for Radford Army Ammunition Plant, Radford, Virginia, VAD-21-002-0730*.
- U.S. Environmental Protection Agency (USEPA). 1994. RCRA Corrective Action Plan (Final). Office of Waste Programs Enforcement, Office of Solid Waste. OSWER Directive 9902.3-2A. May 1994.
- U.S. Environmental Protection Agency (USEPA). 2000. Permit for Corrective Action and Waste Minimization: Pursuant to the Resource Conservation and Recovery Act as Amended by the Hazardous and Solid Waste Amendments of 1984, Radford Army Ammunition Plant, Radford, Virginia, VA1210020730.
- Virginia State Water Control Board (SWCB). 1958. Letter approval for permit to discharge treated industrial wastes resulting from certain new treatment facilities (SWMU 68/69). June 17, 1958.

RADFORD ARMY AMMUNITION PLANT, VIRGINIA

Decision Document

SWMU 69: Pond by Chromic Acid Treatment Tanks No Further Action

August 2007

**SWMU 69
DECISION DOCUMENT
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1.0 PURPOSE

This Decision Document (DD) is prepared in accordance with the Assistant Chief of Staff for Installation Management (ACSIM) memorandum (ACSIM 2003) detailing policies for staffing and approving DDs, Defense Environmental Restoration Program (DERP) management guidance (DERP 2001), and the Radford Army Ammunition Plant (RFAAP) Resource Conservation and Recovery Act (RCRA) Permit, Part II section D (4) (USEPA 2000) (EPA ID No. VA1210020730).

This DD describes the selection of No Further Action for Solid Waste Management Unit (SWMU) 69 - the "Pond by Chromic Acid Treatment Tanks." No Further Action was selected based upon a Site Screening in accordance with the 1976 RCRA, the Hazardous and Solid Waste Amendments of 1984 (HSWA), the RFAAP RCRA Permit requirements (USEPA 2000), and the Final RCRA Corrective Action Plan (USEPA 1994), as applicable.

This task effort was performed in accordance with Work Plan Addendum (WPA) No. 16 (URS 2003a), which incorporated by reference, the elements of the RFAAP Master Work Plan (MWP; URS 2003b).

RFAAP conducted a RCRA Site Screening Process (SSP) for SWMU 69 (URS 2007) that was designed to assess whether releases of hazardous substances, pollutants, contaminants, hazardous wastes, or hazardous constituents have occurred to the environment at the sites evaluated, whether further investigation (i.e., risk assessment or RCRA Facility Investigation (RFI)) or an interim removal action is appropriate at a site, or whether No Further Action is appropriate.

2.0 BACKGROUND INFORMATION

SWMU 69 is 0.012-acre depressed, grassed area located in the western section of the Horseshoe Area (HSA). This area was once a shallow settling pond that collected treated wastewater containing chromium-hydroxide sludge from SWMU 68, the Chromic Acid Treatment Tanks (Hercules 1958). The pond was bermed and approximately 1 to 2 feet deep. The supernatant from SWMU 69 discharged to a perennial stream that flows to the New River (Hercules 1958). In accordance with the recommendations included in the 1992 VI Report for SWMU 69, interim measures were implemented and SWMU 69 underwent closure including removal of impacted soil (Dames & Moore 1994). The SWMU 69 Closure Report was prepared by Dames & Moore and submitted by RFAAP to the USEPA Region III and the VDEQ. Approximately 700 cubic yards of material were excavated during the closure and investigation activities and disposed of at RFAAP Fly Ash Landfill #2. After confirmatory sampling, the excavation(s) were backfilled with clean fill supplied and graded to reestablish the pre-existing drainageway.

As part of the SSP investigation, nine soil samples were collected from three boring locations and analyzed for target compound list (TCL) volatile organic compounds, TCL semi-volatile organic compounds, polynuclear aromatic hydrocarbons, explosives (including nitroglycerin and pentaerythritol tetranitrate (PETN)), and target analyte list inorganics. A selected surface soil sample was also analyzed for TCL pesticides, TCL PCBs, and herbicides. The site passed the residential and industrial cumulative risk screening, lead exposure assessment, iron "margin of exposure" assessment, soil screening level evaluation for the soil to groundwater pathway, and screening level ecological risk assessment. SWMU 69 passed the SSP resulting in a recommendation of no further action (URS 2007). The SSP (URS 2007) was subsequently approved by the Environmental Protection Agency, Region III on June 7, 2007, and the Virginia Department of Environmental Quality on April 13, 2007.

3.0 COMMUNITY RELATIONS RESPONSIVENESS SUMMARY

A community relations plan has been developed for RFAAP that establishes an effective program to inform the community of the RFAAP Installation Restoration Program (IRP) and provide for early and continuous community involvement in the cleanup process. RFAAP has made a commitment to keep citizens informed and give communities a role in environmental cleanup decisions. RFAAP disseminates information on environmental restoration activities, provides opportunities for comment, and seeks public participation on the IRP Restoration Advisory Board (RAB).

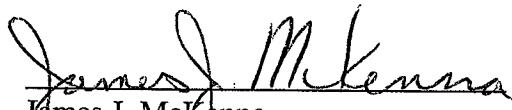
RFAAP and local citizens formed a RAB to provide information and solicit comments and concerns regarding site cleanup activities. The RAB includes members of the local community, representatives from USEPA and Virginia Department of Environmental Quality, and the U.S. Army Environmental Restoration RFAAP Program Manager.

4.0 SUMMARY AND CONCLUSIONS

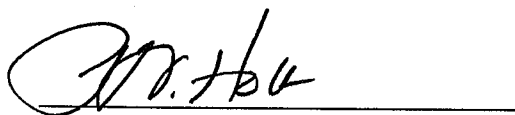
Due to the site passing the screening process, no further action at SWMU 69 is recommended.

5.0 APPROVAL AND SIGNATURE

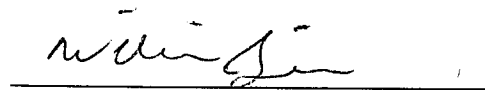
Approved By:


James J. McKenna
Restoration Program Manager
Radford AAP

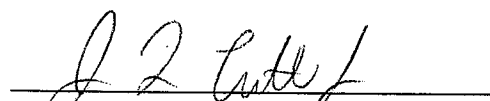
21 Aug 2007
Date


P.W. Holt
Environmental Manager
Alliant Techsystems, Inc.

9/5/07
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William Geiger
RCRA Project Manager
USEPA Region III

9/21/07
Date


James L. Cutler, Jr., CPG
Federal Facilities Project Manager
Virginia DEQ

10/11/07
Date

REFERENCES

- Assistant Chief of Staff for Installation Management (ACSIM). 2003. Memorandum from Major General Larry J. Lust: Policies for Staffing and Approving Decision Documents (DDs), dated 09 September 2003.
- Dames & Moore. 1994. *Closure Report, SWMU 69, Pond by Chromic Acid Treatment Tanks, Radford Army Ammunition Plant, Radford, Virginia*. Prepared for U.S. Army Environmental Center.
- Defense Environmental Restoration Program (DERP). 2001. Memorandum for Assistant Secretary of the Army: Management Guidance for the Defense Environmental Restoration Program, dated 28 September 2001.
- Hercules Powder Company, Inc. (Hercules). 1958. Letter to the Virginia State Water Control Board for application for a permit to discharge treated industrial wastes resulting from waste water treatment facilities (SWMU 68/69). March 14, 1958.
- URS Group, Inc. (URS). 2003a. Work Plan Addendum No. 16, Site Screening Process for Solid Waste Management Units 13, 37, 38, 46, 57, 68, 69, 75, 76, and Areas of Concern A, F, and Q. Prepared for USACE Baltimore District. August 2003.
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- URS Group, Inc. (URS). 2007. Site Screening Process Report at Solid Waste Management Units 13, 37, 38, 45, 57, 68, 69, and Areas of Concern A, F, and Q. Radford Army Ammunition Plant, Radford, Virginia. Prepared for U.S. Army Corps of Engineers, Baltimore District. May 2007.
- U.S. Environmental Protection Agency (USEPA). 1994. RCRA Corrective Action Plan (Final). Office of Waste Programs Enforcement, Office of Solid Waste. OSWER Directive 9902.3-2A. May 1994.
- U.S. Environmental Protection Agency (USEPA). 2000. Permit for Corrective Action and Waste Minimization: Pursuant to the Resource Conservation and Recovery Act as Amended by the Hazardous and Solid Waste Amendments of 1984, Radford Army Ammunition Plant, Radford, Virginia, VA1210020730.
- Virginia State Water Control Board (SWCB). 1958. Letter approval for permit to discharge treated industrial wastes resulting from certain new treatment facilities (SWMU 68/69). June 17, 1958.

RADFORD ARMY AMMUNITION PLANT, VIRGINIA

Decision Document

SWMU 75: Used Oil Storage Tank (Inert Gas Plant) No Further Action

August 2007

**SWMU 75
DECISION DOCUMENT
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1.0 PURPOSE

This Decision Document (DD) is prepared in accordance with the Assistant Chief of Staff for Installation Management (ACSIM) memorandum (ACSIM 2003) detailing policies for staffing and approving DDs, Defense Environmental Restoration Program (DERP) management guidance (DERP 2001), and the Radford Army Ammunition Plant (RFAAP) Resource Conservation and Recovery Act (RCRA) Permit, Part II section D (4) (USEPA 2000) (EPA ID No. VA1210020730).

This DD describes the selection of No Further Action for Solid Waste Management Unit (SWMU) 75 - the "Used Oil Storage Tank (Inert Gas Plant)." No Further Action was selected based upon a Site Screening in accordance with the 1976 RCRA, the Hazardous and Solid Waste Amendments of 1984 (HSWA), the RFAAP RCRA Permit requirements (USEPA 2000), and the Final RCRA Corrective Action Plan (USEPA 1994), as applicable.

RFAAP conducted a RCRA Site Screening Process (SSP) desktop audit for SWMU 75 during the preparation of Work Plan Addendum (WPA) No. 16 (URS 2003a) and concluded that based on the previous documented actions as annotated in WPA 16 no further action was necessary. WPA 16 was subsequently approved by the Environmental Protection Agency, Region III (EPA) on September 8, 2003, and the Virginia Department of Environmental Quality (VDEQ) on August 28, 2003. Note WPA 16 was designed to assess whether releases of hazardous substances, pollutants, contaminants, hazardous wastes, or hazardous constituents have occurred to the environment at the sites evaluated, whether further investigation (i.e., risk assessment or RCRA Facility Investigation (RFI)) or an interim removal action is appropriate at a site, or whether No Further Action (NFA) is appropriate.

2.0 BACKGROUND INFORMATION

SWMU 75 is the area of a previously removed 750-gallon underground storage tank (UST) utilized for the storage of used oil from RFAAP. The UST consisted of a single-walled tank installed in 1973 with a capacity of 750 gallons. The UST stored used oil and hydraulic fluids that were generated in a nearby compressor building. Tank use ceased in June 1991 and the Installation completed removal in June 1995.

In 1995, RFAAP conducted a tank removal and closure at SWMU 75. A site characterization report was prepared and submitted to the VDEQ including an amended VDEQ Form 7530-1 (Notification of Underground Storage Tanks) indicating tank closure. According to VDEQ database records, the SWMU 75 tank closure was assigned file number PC-95-1099 and records indicate, "No initial abatement report needed." Records further indicate that the PC-95-1099 file was "closed October 1995." Closure correspondence from the VDEQ Water Regional Office stated that, "Based on the information provided [in the site characterization report], it appears that acceptable site characterization and abatement measures have been achieved." The correspondence also stated that, "There does not appear to be a current or potential risk to human health or the environment (VDEQ 1995)."

3.0 COMMUNITY RELATIONS RESPONSIVENESS SUMMARY

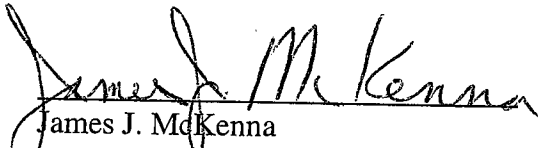
A community relations plan has been developed for RFAAP that establishes an effective program to inform the community of the RFAAP Installation Restoration Program (IRP) and provide for early and continuous community involvement in the cleanup process. RFAAP has made a commitment to keep citizens informed and give communities a role in environmental cleanup decisions. RFAAP disseminates information on environmental restoration activities, provides opportunities for comment, and seeks public participation on the IRP Restoration Advisory Board (RAB).

4.0 SUMMARY AND CONCLUSIONS

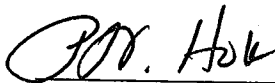
The tanks associated with this SWMU have been removed, impacted soil was removed, closure notification was filed, and closure was approved by the VDEQ. In accordance with WPA 16, as approved by the EPA on September 8, 2003, and the VDEQ on August 28, 2003, no further action at SWMU 75 is recommended.

5.0 APPROVAL AND SIGNATURE

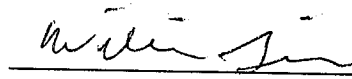
Approved By:


James J. McKenna
Restoration Program Manager
Radford AAP

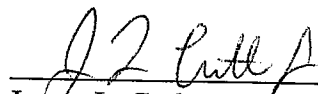
21 Aug 2007
Date


P.W. Holt
Environmental Manager
Alliant Techsystems, Inc.

9/5/07
Date


William Geiger
RCRA Project Manager
USEPA Region III

9/21/07
Date


James L. Cutler, Jr., CPG
Federal Facilities Project Manager
Virginia DEQ

10/1/07
Date

6.0 REFERENCES

- Assistant Chief of Staff for Installation Management (ACSIM). 2003. Memorandum from Major General Larry J. Lust: Policies for Staffing and Approving Decision Documents (DDs), dated 09 September 2003.
- Defense Environmental Restoration Program (DERP). 2001. Memorandum for Assistant Secretary of the Army: Management Guidance for the Defense Environmental Restoration Program, dated 28 September 2001.
- URS Group, Inc. (URS). 2003a. Work Plan Addendum No. 16, Site Screening Process for Solid Waste Management Units 13, 37, 38, 46, 57, 68, 69, 75, 76, and Areas of Concern A, F, and Q. Prepared for USACE Baltimore District. August.
- URS Group, Inc. (URS). 2003b. Master Work Plan, Quality Assurance Plan, Health and Safety Plan. Radford Army Ammunition Plant, Radford, Virginia. Prepared for U.S. Army Corps of Engineers, Baltimore District. August.
- U.S. Environmental Protection Agency (USEPA). 1994. RCRA Corrective Action Plan (Final). Office of Waste Programs Enforcement, Office of Solid Waste. OSWER Directive 9902.3-2A. May 1994.
- U.S. Environmental Protection Agency (USEPA). 2000. Permit for Corrective Action and Waste Minimization: Pursuant to the Resource Conservation and Recovery Act as Amended by the Hazardous and Solid Waste Amendments of 1984, Radford Army Ammunition Plant, Radford, Virginia, VA1210020730.
- Virginia Department of Environmental Quality West Central Regional Office (VDEQ). 1995. Correspondence from Ken Chapman, Senior Geologist, to Joe Wilson re: Site Characterization and Abatement Measures Close-out, RFAAP UST No. 421, LUST PC-95-1099, Facility ID No. 2-000051. October 3, 1995.

RADFORD ARMY AMMUNITION PLANT, VIRGINIA

Decision Document

SWMU 76: Oil Tanks No Further Action

August 2007

**SWMU 76
DECISION DOCUMENT
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1.0 PURPOSE

This Decision Document (DD) is prepared in accordance with the Assistant Chief of Staff for Installation Management (ACSIM) memorandum (ACSIM 2003) detailing policies for staffing and approving DDs, Defense Environmental Restoration Program (DERP) management guidance (DERP 2001), and the Radford Army Ammunition Plant (RFAAP) Resource Conservation and Recovery Act (RCRA) Permit, Part II section D (4) (USEPA 2000) (EPA ID No. VA1210020730).

This DD describes the selection of No Further Action for Solid Waste Management Unit (SWMU) 76 - the "Oil Tanks." No Further Action was selected based upon a Site Screening in accordance with the 1976 RCRA, the Hazardous and Solid Waste Amendments of 1984 (HSWA), the RFAAP RCRA Permit requirements (USEPA 2000), and the Final RCRA Corrective Action Plan (USEPA 1994), as applicable.

RFAAP conducted a RCRA Site Screening Process (SSP) desktop audit for SWMU 76 during the preparation of Work Plan Addendum (WPA) No. 16 (URS 2003a) and concluded that based on the previous documented actions as annotated in WPA 16 no further action was necessary. WPA 16 was subsequently approved by the Environmental Protection Agency, Region III (EPA) on September 8, 2003, and the Virginia Department of Environmental Quality (VDEQ) on August 28, 2003. Note WPA 16 was designed to assess whether releases of hazardous substances, pollutants, contaminants, hazardous wastes, or hazardous constituents have occurred to the environment at the sites evaluated, whether further investigation (i.e., risk assessment or RCRA Facility Investigation (RFI)) or an interim removal action is appropriate at a site, or whether No Further Action is appropriate.

2.0 BACKGROUND INFORMATION

SWMU 76 formerly consisted of two underground used oil collection tanks situated adjacent to the southeast perimeter of SWMU 17. The capacity of one tank was 5,500 gallons and the capacity of the second tank was 2,650 gallons. Used oil from machinery and vehicle engines throughout RFAAP was collected in the Mobile Used Oil Tanks (SWMU 61) and stored in the SWMU 76 tanks. The two underground storage tanks (USTs) at SWMU 76 were removed and closed in June 1991.

A Site Check Report was prepared and submitted to the Virginia State Water Control Board (now part of the VDEQ) including an amended VDEQ Form 7530-1 indicating tank closure (VDEQ 1992). According to VDEQ database records, the SWMU 76 tank closure was assigned file number PC-91-1777 and a VDEQ correspondence indicates, "it appears that acceptable site check measures for the suspected petroleum UST release have been achieved, and no further UST investigation is required at this time (VDEQ 1992)." VDEQ records further indicate tank closure was completed and the file closed in September 1992 (VDEQ 1992).

3.0 COMMUNITY RELATIONS RESPONSIVENESS SUMMARY

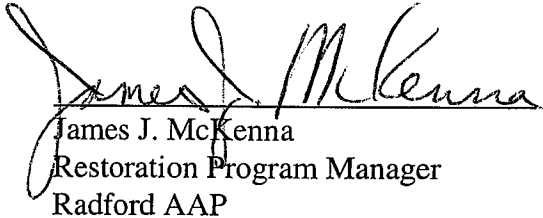
A community relations plan has been developed for RFAAP that establishes an effective program to inform the community of the RFAAP Installation Restoration Program (IRP) and provide for early and continuous community involvement in the cleanup process. RFAAP has made a commitment to keep citizens informed and give communities a role in environmental cleanup decisions. RFAAP disseminates information on environmental restoration activities, provides opportunities for comment, and seeks public participation on the IRP Restoration Advisory Board (RAB).

4.0 SUMMARY AND CONCLUSIONS

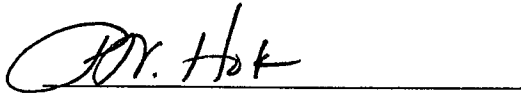
The tanks associated with this SWMU have been removed, impacted soil was removed, closure notification was filed, and closure was approved by the VDEQ. In accordance with WPA 16, as approved by the EPA on September 8, 2003, and the VDEQ on August 28, 2003, no further action at SWMU 76 is recommended.

5.0 APPROVAL AND SIGNATURE


Approved By:


James J. McKenna
Restoration Program Manager
Radford AAP

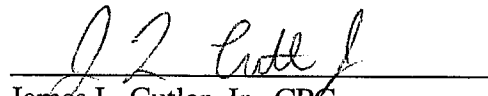
21 Aug 2007
Date


P.W. Holt
Environmental Manager
Alliant Techsystems, Inc.

9/5/07
Date


William Geiger
RCRA Project Manager
USEPA Region III

9/21/07
Date


James L. Cutler, Jr., CPG
Federal Facilities Project Manager
Virginia DEQ

10/1/07
Date

6.0 REFERENCES

- Assistant Chief of Staff for Installation Management (ACSIM). 2003. Memorandum from Major General Larry J. Lust: Policies for Staffing and Approving Decision Documents (DDs), dated 09 September 2003.
- Defense Environmental Restoration Program (DERP). 2001. Memorandum for Assistant Secretary of the Army: Management Guidance for the Defense Environmental Restoration Program, dated 28 September 2001.
- URS Group, Inc. (URS). 2003a. Work Plan Addendum No. 16, Site Screening Process for Solid Waste Management Units 13, 37, 38, 46, 57, 68, 69, 75, 76, and Areas of Concern A, F, and Q. Prepared for USACE Baltimore District. August.
- URS Group, Inc. (URS). 2003b. Master Work Plan, Quality Assurance Plan, Health and Safety Plan. Radford Army Ammunition Plant, Radford, Virginia. Prepared for U.S. Army Corps of Engineers, Baltimore District. August.
- U.S. Environmental Protection Agency (USEPA). 1994. RCRA Corrective Action Plan (Final). Office of Waste Programs Enforcement, Office of Solid Waste. OSWER Directive 9902.3-2A. May 1994.
- U.S. Environmental Protection Agency (USEPA). 2000. Permit for Corrective Action and Waste Minimization: Pursuant to the Resource Conservation and Recovery Act as Amended by the Hazardous and Solid Waste Amendments of 1984, Radford Army Ammunition Plant, Radford, Virginia, VA1210020730.
- Virginia Department of Environmental Quality West Central Regional Office (VDEQ). 1992. Correspondence from David M. Miles, CPG, to E. M. Soucek re: Initial Abatement Measures and Site Characterization Close-out, RFAAP, LUST PC-91-1777, 29-0012K. September 9, 1992.

RADFORD ARMY AMMUNITION PLANT, VIRGINIA

Decision Document

**AOC F: Former Drum Storage Area
No Further Action**

August 2007

**AOC F
DECISION DOCUMENT
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1.0 PURPOSE

This Decision Document (DD) is prepared in accordance with the Assistant Chief of Staff for Installation Management (ACSIM) memorandum (ACSIM 2003) detailing policies for staffing and approving DDs, Defense Environmental Restoration Program (DERP) management guidance (DERP 2001), and the Radford Army Ammunition Plant (RFAAP) Resource Conservation and Recovery Act (RCRA) Permit, Part II section D (4) (USEPA 2000) (EPA ID No. VA1210020730).

This DD describes the selection of No Further Action for Area of Concern (AOC) F - the "Former Drum Storage Area." No Further Action was selected based upon a Site Screening in accordance with the 1976 RCRA, the Hazardous and Solid Waste Amendments of 1984 (HSWA), the RFAAP RCRA Permit requirements (USEPA 2000), and the Final RCRA Corrective Action Plan (USEPA 1994), as applicable.

This task effort was performed in accordance with Work Plan Addendum (WPA) No. 16 (URS 2003a), which incorporated by reference, the elements of the RFAAP Master Work Plan (MWP; URS 2003b).

RFAAP conducted a RCRA Site Screening Process (SSP) for AOC F (URS 2007) that was designed to assess whether releases of hazardous substances, pollutants, contaminants, hazardous wastes, or hazardous constituents have occurred to the environment at the sites evaluated, whether further investigation (i.e., risk assessment or RCRA Facility Investigation (RFI)) or an interim removal action is appropriate at a site, or whether No Further Action is appropriate.

2.0 BACKGROUND INFORMATION

AOC F is a constructed 50 foot by 50 foot gravel-covered area located approximately 80 feet southeast of an unrelated building and 300 ft from the New River in the northern section of the MMA. Empty drums from throughout RFAAP (including the Nitroglycerin Area, Rocket Area, and Green Line; ATK 2002) were stacked on their sides at AOC F prior to being sold for recycling. The drums were reportedly rinsed prior to being stored. The drums may have contained diethyl phthalate, sodium hydrosulfide, ethyl lactate/butyl acetate solvent mix, dinitro-propylamine, waste oil or oily water, and 2-nitro-diphenylamine (ATK 2002).

As part of the SSP investigation, 12 soil samples were collected from four boring locations and analyzed for target compound list (TCL) volatile organic compounds, TCL semi-volatile organic compounds, polynuclear aromatic hydrocarbons, explosives (including nitroglycerin and pentaerythritol tetranitrate (PETN)), and target analyte list inorganics. A four selected soil samples were also analyzed for TCL pesticides, TCL PCBs, and herbicides. The site passed the residential and industrial cumulative risk screening, lead exposure assessment, iron "margin of exposure" assessment, and screening level ecological risk assessment. Two chemicals in soil, chromium and dieldrin, exceeded their calculated site-specific soil screening levels for the soil-to-groundwater pathway; therefore, one monitoring well was installed to evaluate potential leaching to groundwater. Evaluation of the soil-to-groundwater migration pathway for pesticides and chromium did not indicate leaching of pesticides to groundwater or leaching of chromium to groundwater at levels above the adjusted tap water risk based concentration (USEPA 2006). AOC F passed the SSP resulting in a recommendation of no further action (URS 2007). The SSP (URS 2007) was subsequently approved by the Environmental Protection Agency, Region III on June 7, 2007, and the Virginia Department of Environmental Quality on April 13, 2007.

3.0 COMMUNITY RELATIONS RESPONSIVENESS SUMMARY

A community relations plan has been developed for RFAAP that establishes an effective program to inform the community of the RFAAP Installation Restoration Program (IRP) and provide for early and continuous community involvement in the cleanup process. RFAAP has made a commitment to keep citizens informed and give communities a role in environmental cleanup decisions. RFAAP disseminates information on environmental restoration activities, provides opportunities for comment, and seeks public participation on the IRP Restoration Advisory Board (RAB).

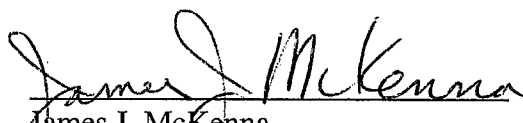
RFAAP and local citizens formed a RAB to provide information and solicit comments and concerns regarding site cleanup activities. The RAB includes members of the local community, representatives from USEPA and Virginia Department of Environmental Quality, and the U.S. Army Environmental Restoration RFAAP Program Manager.

4.0 SUMMARY AND CONCLUSIONS

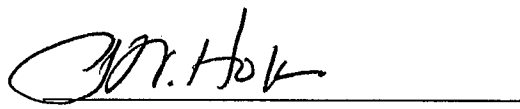
Due to the site passing the screening process, no further action at AOC F is recommended.

5.0 APPROVAL AND SIGNATURE

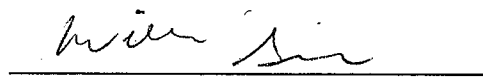
Approved By:


James J. McKenna
Restoration Program Manager
Radford AAP

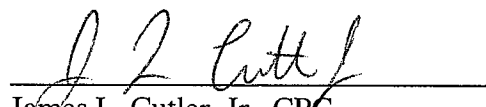
21 Aug 2007
Date


P.W. Holt
Environmental Manager
Alliant Techsystems, Inc.

9/15/07
Date


William Geiger
RCRA Project Manager
USEPA Region III

9/21/07
Date


James L. Cutler, Jr., CPG
Federal Facilities Project Manager
Virginia DEQ

10/1/07
Date

6.0 REFERENCES

- Alliant TechSystems, Inc. (ATK). 2002. *Responses to URS Group SSP Questions*.
- Assistant Chief of Staff for Installation Management (ACSIM). 2003. Memorandum from Major General Larry J. Lust: Policies for Staffing and Approving Decision Documents (DDs), dated 09 September 2003.
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