

RADFORD ARMY AMMUNITION PLANT, VIRGINIA

Decision Document

SWMU 58: Rubble Pile – No Further Action

FINAL

August 2004

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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 RFAAP RCRA Permit, Part II sect. D (4) (USEPA, 2000) (EPA ID No. VA1210020730). This DD describes the selection of No Further Action for Solid Waste Management Unit 58 - the "Rubble Pile" at Radford Army Ammunition Plant (RFAAP). No Further Action was selected in accordance with the Resource Conservation and Recovery Act of 1976 (RCRA), the Hazardous and Solid Waste Amendments of 1984 (HSWA), the RFAAP Resource Conservation and Recovery Act (RCRA) Permit requirements (USEPA, 2000) (EPA ID No. VA1210020730), and the Final RCRA Corrective Action Plan (USEPA, 1994), as applicable.

SWMU 58 is located in the south-central portion of the Horseshoe Area, east of the main bridge over the New River and directly west of SWMU 32 (Inert Waste Landfill No. 1). There are several buildings, an overhead steam pipe, and gravel and paved roads in the vicinity. SWMU 58 is roughly triangular in shape with each side approximately 300 ft long. Although the pile is irregular in height, the highest elevation point measured at the top of the pile during the advancement of soil boring 58SB04 in July 2002 was 1,771 ft msl or 35 ft above the natural ground surface elevation of 1,736 ft msl. According to facility representatives interviewed during a March 1990 facility visit, SWMU 58 was used as a one-time construction debris disposal site in 1979. During clearing activities prior to the construction of the Continuous Automated Multi-Base Line (CAMBL), pine trees and surface debris were pushed into a pile and then covered with dirt and fill material. It is believed that vegetation (trees/brush) from the clearing activities was burned to reduce the volume of the pile. It is also believed that no other materials were disposed at SWMU 58.

The results of the RCRA Facility Investigation (RFI) human health and ecological risk assessment results indicated that no unacceptable risk is associated with unrestricted reuse of the SWMU 58 area. This is a more conservative use of the property than the current or anticipated future land use for SWMU 58 (open riparian space). Based on no unacceptable risk to human health and the environment, the Army has selected No Further Action as the preferred remedial alternative for SWMU 58 with concurrence from the U.S Environmental Protection Agency (USEPA) Region III, Virginia Department of Environmental Quality (VDEQ) and the U.S. Army for Health Promotion and Preventive Medicine (USACHPPM). Documents supporting this decision are located in the RFAAP information repository.

2.0 SITE RISK

A baseline human health risk assessment (HHRA) and screening-level ecological risk assessment (SLERA) were conducted as part of the SWMU 58 RFI.

An HHRA was performed to evaluate the potential human health effects associated with past activities at SWMU 58. Using the results of the human exposure assessment and toxicity information, potential human health risks for each Contaminant of Potential Concern (COPC) and selected exposure pathway were evaluated. Results of the HHRA indicate that the cumulative cancer risk associated with both surface soil and total soil for maintenance workers, and total soil

for excavation workers, adult residents, and child residents were below or within the U.S. Environmental Protection Agency (USEPA) target risk range of 1×10^{-6} to 1×10^{-4} . The non-carcinogenic Hazard Index (HI) was below 1 for maintenance workers, excavation workers, and adult residents. For child residents, the non-carcinogenic HI was equal to 1.1. However, there were no predominant COPCs representing non-carcinogenic hazards (i.e., no chemical HI was equal to or exceeded 1). Trichloroethene (TCE) and benzo(a)pyrene were the risk drivers for the limited potential human health risk calculated.

A SLERA was performed to provide an estimate of current and future ecological risk associated with potential hazardous substance releases at SWMU 58. Environmental Effects Quotients (EEQs) and hazard indices were estimated for five selected receptor species, and direct contact exposure for terrestrial invertebrates was assessed, as these invertebrates may serve as a food supply for some of the selected receptor species. Initial results indicated the potential for adverse effects to some of the five species, however, based on likely overestimates of (1) toxicity; and, (2) uptake of inorganics by earthworms from soil; and, that no wildlife rare, threatened, or endangered species have been confirmed at the SWMU 58 study area, no further action is recommended for the site for food chain exposure considerations. A similar recommendation of no further action results from the finding of limited potential for a reduction in terrestrial invertebrates that may serve as a food supply for higher order wildlife, based on direct contact considerations.

3.0 REMEDIAL ALTERNATIVES

Based on the results of the human health and ecological risk assessments, no unacceptable risk to human health or the environment exists at SWMU 58; therefore, no remedial alternatives have been considered. The Army has selected No Further Action as the preferred remedial alternative for SWMU 58.

4.0 PUBLIC/COMMUNITY INVOLVEMENT

RFAAP has a Restoration Advisory Board (RAB) that has been actively involved throughout the environmental investigation activities conducted during the RFI. The RAB includes representatives from USEPA and the Virginia Department of Environmental Quality (VDEQ), as well as members of the local community.

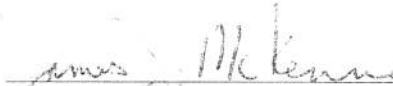
Comments on the RFI were solicited from the USEPA and VDEQ. Comments were received and considered by the U.S. Army prior to selection of the No Further Action alternative for SWMU 58.

5.0 DECLARATION

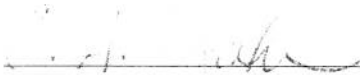
No remedial action is necessary at SWMU 58 to ensure the protection of human health and the environment. Therefore, none of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) §121 statutory determinations are necessary since no remedy is being selected. Since no site-related hazardous substances are present onsite above levels that allow for unlimited use and unrestricted exposure, the five-year review will not apply at this site.

6.0 APPROVAL AND SIGNATURE


Approved By:


James J. McKenna
Restoration Program Manager
Radford AAP

13 Dec 2004
Date


Carolyn A. Jake
Environmental Manager
Alliant Ammunition and Powder Company, LLC

12/13/04
Date


Robert G. Thomson
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12/16/04
Date

7.0 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.

U.S. Environmental Protection Agency (USEPA), 1994. *Final RCRA Corrective Action Plan*, Office of Solid Waste and Emergency Response. EPA/520/R/94/004.

U.S. Environmental Protection Agency (USEPA), 2000. *Radford Army Ammunition Plant Permit for Corrective Action and Waste Minimization*. Permit No. VA1210020730. 31 October 2000.

U.S. Army Radford Army Ammunition Plant (RFAAP), 2003. *SWMU 58 RCRA Facility Investigation Report, Final Document December 2003*.