

FY2007

RAVENNA ARMY AMMUNITION PLANT

Installation Action Plan

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Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multi- year Installation Cleanup Program for an installation. The plan identifies environmental cleanup requirements at each site or area of concern, and proposes a comprehensive, installation- wide approach, with associated costs and schedules, to conduct investigations and necessary remedial actions.

In an effort to coordinate planning information between the restoration manager, US Army Environmental Command (USAEC), National Guard Bureau (NGB), US Army Corps of Engineers - Louisville District, Ravenna Army Ammunition Plant, and Ohio Environmental Protection Agency, an IAP was completed. The IAP is used to track requirements, schedules and tentative budgets for all Army installation cleanup programs.

All site- specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

The following persons contributed to the formulation and completion of this Installation Action Plan for RAVENNA ARMY AMMUNITION PLANT during a planning workshop/book update held on 20- 22 February 2007:

US Army Environmental Command (USAEC)
US Army Corps of Engineers - Louisville District
Ohio Environmental Protection Agency
USACE - Louisville District
Ohio Environmental Protection Agency
Ohio Army National Guard (OHARNG- RTLS- EN)
Ohio Environmental Protection Agency
MSLLC
US Army Corps of Engineers - Louisville District
Engineering and Environment, Inc. for USAEC
US Army Corps of Engineers - Louisville District
US Army Environmental Command (USAEC)
US Army Environmental Command (USAEC)
Ohio Army National Guard (OHARNG- RTLS)
Ohio Environmental Protection Agency
Engineering and Environment, Inc. for USAEC
US Army Corps of Engineers
Ravenna Army Ammunition Plant

AEDB- R	Army Environmental Database - Restoration
AOC	Area of Concern
ARNG	US Army National Guard
ASR	Archive Search Report
bgs	below ground surface
BRAC	Base Realignment and Closure
CA	Corrective Action
CC	Compliance- Related Cleanup
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
COC	Contaminants of Concern
CTC	Cost- to- Complete
CTT	Closed, Transferred, and Transferring
cy	cubic yard
DD	Decision Document
DDESB	Department of Defense Explosive Safety Board
DERP	Defense Environmental Restoration Program
DFFO	Director's Final Findings & Orders
EE/CA	Engineering Evaluation/Cost Analysis
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
ER	Emergency Removal
ER,A	Environmental Restoration, Army
FFS	Focused Feasibility Study
FPRI	Fixed- Price Remediation with Insurance
FS	Feasibility Study
ft	feet
FY	Fiscal Year
GO/CO	Government- Owned/Contractor- Operated
GW	ground water
HMX	Cyclotetramethylenetetranitramine
IAP	Installation Action Plan
IMCOM	Installation Management Command
IRA	Interim Remedial Action
IRP	Installation Restoration Program
K	Thousand
LAP	Load, Assemble and Pack
LL	Load Line
LTM	Long- Term Management
LUC	Land Use Control
MACOM	Major Command
MC	Munitions Constituent
MCL	Maximum Contaminant Level
MEC	Munitions and Explosives of Concern
mm	millimeter
MMRP	Military Munitions Response Program

MNA	Monitored Natural Attenuation
MRSPP	Munition Response Site Prioritization Protocol
N/A	Not Applicable
NACA	National Advisory Committee on Aeronautics
NE	Northeast or Not Evaluated
NFA	No Further Action
NGB	National Guard Bureau
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
ODA	Open Demolition Area
OE	Ordnance and Explosives
OEPA	Ohio Environmental Protection Agency
OHARNG	Ohio Army National Guard
Ohio EPA	Ohio Environmental Protection Agency
OMA	Operation and Maintenance Account
OSC	Operations Support Command
OSD	Office of the Secretary of Defense
PA	Preliminary Assessment
PBC	Performance- Based Contract
PMP	Property Management Plan
PP	Proposed Plan
ppm	parts per million
PY	Prior Year
RA	Remedial Action
RA(C)	Remedial Action (Construction)
RAC	Risk Assessment Code (now MRSPP)
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RDRA	remedial design/remedial action
RDX	Cyclotrimethylenetrinitramine
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RIP	Remedy- in- Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
RTLS	Ravenna Training and Logistics Site
RVAAP	Ravenna Army Ammunition Plant
SAIC	Science Application International Corporation
SI	Site Inspection
SVOC	Semi- Volatile Organic Compound
TAPP	Technical Assistance for Public Participation
TD	Thermal Decomposition
TNT	Trinitrolouene
TRC	Technical Review Committee

USACE US Army Corps of Engineers
USACHPPM US Army Center for Health Promotion and Preventive Medicine
USAEC US Army Environmental Command
USAEHA US Army Environmental Hygiene Agency (now USACHPPM)
USATCES US Army Technical Center for Explosives Safety
USATHAMA US Army Toxic and Hazardous Materials Agency
USATHAMA United States Army Toxic and Hazardous Materials Agency (now USAEC)
USEPA US Environmental Protection Agency
UST Underground Storage Tank
UXO Unexploded Ordnance
VOC Volatile Organic Compounds
WPG Winklepeck Burning Ground

Installation Information

Installation Locale

Installation Size (Acreage): 21,683.28

City: Ravenna

County: Portage and Trumbull

State: Ohio

Other Locale Information

Prior to 2002, the Ravenna Army Ammunition Plant (RVAAP) was identified as a 21,419- acre installation. The property boundary was resurveyed by the Ohio Army National Guard (OHARNG) over a two year period 2002 and 2003 and the actual total acreage of the property was found to be 21,683.289 acres. As of February 2006, a total of 20,403 acres of the former 21,683 acre RVAAP have been transferred to the United States Property and Fiscal Officer (USP&FO) for Ohio for use by the OHARNG as a military training site.

The current RVAAP consists of 1,280 acres in several distinct parcels scattered throughout the confines of the OHARNG Ravenna Training and Logistics Site (RTLS). The RVAAP and the RTLS are collocated on contiguous parcels of property and the RTLS perimeter fence completely encloses the remaining parcels of the RVAAP. The RTLS is in northeastern Ohio within Portage and Trumbull Counties, approximately 4.8 kilometers (3 miles) east northeast of the City of Ravenna and approximately 1.6 kilometers (1 mile) northwest of the City of Newton Falls. The RVAAP portions of the property are solely located within Portage County. The RTLS (inclusive of the RVAAP) is a parcel of property approximately 17.7 kilometers (11 miles) long and 5.6 kilometers (3.5 miles) wide, bounded by State Route 5, the Michael J. Kirwan Reservoir, and the CSX System Railroad on the south; Garret, McCormick, and Berry roads on the west; the Norfolk Southern Railroad on the north; and State Route 534 on the east.

The RTLS is surrounded by several communities: Windham on the north; Garrettsville 9.6 kilometers (6 miles) to the northwest; Newton Falls 1.6 kilometers (1 mile) to the southeast; Charlestown to the southwest; and Wayland 4.8 kilometers (3 miles) to the south. When the RVAAP was operational the RTLS did not exist and the entire 21,683- acre parcel was a government-owned/contractor- operated (GO/CO) industrial facility. The RVAAP Installation Restoration Program (IRP) encompasses investigation and cleanup of past activities over the entire 21,683 acres of the former RVAAP and therefore references to the RVAAP in this document are considered to be inclusive of the historical extent of the RVAAP, which is inclusive of the combined acreages of the current RTLS and RVAAP, unless otherwise specifically stated.

Installation Mission

In FY93, the mission of RVAAP was changed from inactive- maintained to modified caretaker status (limited mission). MKM Engineers is the operating contractor.

Lead Organization

Base Realignment and Closure Division

Lead Executing Agencies for Installation

US Army Corps of Engineers, Louisville District

Regulator Participation

Federal	US Environmental Protection Agency
State	Ohio Environmental Protection Agency

National Priorities List (NPL) Status

No NPL Sites have been identified

Installation Restoration Advisory Board (RAB)/Technical Review Committee (TRC)/Technical Assistance for Public Participation (TAPP) Status

RAB established 1996

Installation Program Summaries

IRP

Primary Contaminants of Concern: Asbestos, Chemical weapon munitions/Chemical agent, Explosives, Metals, Munitions and explosives of concern, Munitions constituents, Nitrate/Nitrite, Polynuclear Aromatic Hydrocarbons, Semi- volatiles, White Phosphorous

Affected Media of Concern: Groundwater, Sediment, Soil, Surface Water

Estimated Date for Remedy- In- Place (RIP)/Response Complete (RC): 201409/201409

Prior Funding: \$44,742.0 K

Current Requirements: \$2,272.0 K

Future Requirements: \$72,468.0 K

MMRP

Primary Contaminants of Concern: Munitions and explosives of concern, Munitions constituents

Affected Media of Concern: Groundwater, Sediment, Soil, Surface Water

Estimated Date for Remedy- In- Place (RIP)/Response Complete (RC): 201210/201309

Prior Funding: \$.0 K

Current Requirements: \$470.5 K

Future Requirements: \$60,713.0 K

Cleanup Program Summary

Installation Historic Activity

RVAAP is a government- owned/contractor- operated (GO/CO) US Army BRAC facility. RVAAP was excised in 1992. Storage of explosives continued until 2004. The installation is approximately 11 miles long and 3.5 miles wide area. In August 1940, a tract of land covering 25,000 acres was purchased by the United States Government in the northeastern part of Ohio in Portage and Trumbull counties. Construction of the load, assemble, and pack (LAP) facility started in September 1940. Munitions production activities started in August 1941. The primary missions of the facility included depot storage and ammunition loading, assembling and packing. The facility went through several name changes during its history before being designated the RVAAP in 1961.

The facilities were operated by the Atlas Powder Company from September 1940 until the end of World War II when the operation of the plant was turned over to the Ordnance Department. From 1946 to 1949, the ammonium nitrate line was operated by the Silas Mason Company for the production of ammonium nitrate fertilizer. The plant was placed in standby status in 1950. The plant was reactivated during the Korean War for the loading and packing of major caliber projectiles and components. All production ended in August 1957; and in October 1957, the installation was again placed in a standby condition.

From January to July 1961, Load Line 12 was used to melt out and recover explosives from bombs, the first operation of this type in the ammunition industry. The RVAAP was once again reactivated in May 1968 to produce munitions on three load lines and two component lines in support of the Vietnam War. These facilities were subsequently deactivated in August 1972. A mission for the demilitarization of various munitions continued on a periodic basis through 1992.

RVAAP received a Resource Conservation and Recovery Act (RCRA) Part A permit in 1980 for the storage and treatment of off-spec munitions and munitions- related waste. RVAAP submitted a RCRA Part B permit application in 1992 for the installation's Open Burning and Open Detonation Grounds and a hazardous waste storage building. Open Demolition Area (ODA) # 2 (RVAAP- 04) is the only active RCRA unit at the RVAAP. All others have been closed.

The Operations Support Command (OSC) transferred control and operation of 16,164 acres to the NGB in May 1999. In March 2002, an agreement was signed to transfer an additional 3,774 uncontaminated acres to the NGB with the remaining acreage to be transferred as restoration of the sites is completed. As of February 2006, a total of 20,403 acres of the former RVAAP have been transferred to the NGB for use by the OHARNG.

To complete Installation Restoration Program (IRP), Military Munitions Response Program (MMRP), and decontamination and demolition of excess buildings for transfer of all property to NGB, with subsequent transfer of accountability to OHARNG by 2018.

In June 2004, the Army and Ohio EPA signed the Director's Findings and Orders to authorize continued use of Open Demolition Area #2 to support environmental restoration activities (blow in place and emergency demolition actions are authorized without the need to obtain emergency permits). In addition, the Orders authorize the investigation of deactivation furnace soils under Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA); and authorize the conduct of groundwater monitoring at RVAAP- 01 and 04 under CERCLA. Ravenna Army Ammunition Plant will close the Demolition Area #2 RCRA unit when it is no longer needed to support restoration.

In 2006, a decision was made to no longer consider thermal decomposition of the explosive- contaminated buildings. Conventional demolition methods with special precautions are being used.

Major Issues: Continued support of all the stakeholders, including the public, at RVAAP will be needed to meet the schedules, objectives, and cost estimates identified in this IAP. Completion of the IRP and MMRP projects at some sites may be delayed due to lack of funding for removal of large concrete structures and investigation of sewer systems in some of the load lines needed for training by the OHARNG.

RVAAP is not on the USEPA NPL, although it is in the USEPA CERCLIS database. Management of the IRP sites follows CERCLA requirements. There are a number of other regulatory programs addressing other non- IRP sites.

Cleanup Program Summary

Installation Program Cleanup Progress

IRP

- Prior Year Progress: Completed all RI/FSs in High sites Performance- Based Contract for RVAAP- 01,02,04,12,16 & 49. Completed RVAAP- 05 FFS and PP. Completed one year of monitoring Facility- Wide GW Monitoring Program. Completed interim RODs for RVAAP- 08 through RVAAP- 11.
- Future Plan of Action: Complete IRA at RVAAP 08, 09, 10, 11. The LUC issues will be resolved. Complete ROD, remediation of RVAAP- 01, 02, 04, 05, 12, 16 & 49 and complete transfer of RVAAP- 05. Develop CC sites for appropriate sewer lines and the 1.5 acre RCRA unit in ODA#2.

MMRP

- Prior Year Progress: Site Inspection (SI) underway.
- Future Plan of Action: SI to be completed in FY08. RI/FS scheduled to start in FY09.

Transfer Summary

Total Installation Acres: 21,683.28

Parcel Name: 40 mm Test Range/Waterworks Ponds

Parcel Size: 58.00

Associated Sites: RVAAP- 32, RVAAP- 16, RVAAP- 016- R- 01, RVAAP- 032- R- 01

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: N/A

Parcel Name: Anchor Test Area

Parcel Size: 2.00

Associated Sites: RVAAP- 48, RVAAP- 048- R- 01

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: N/A

Parcel Name: Building 1039

Parcel Size: .40

Associated Sites:

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: NGB requires a letter from Ohio EPA indicating property acceptable for planned reuse.

Ohio EPA will not provide requested letter until investigations have occurred. No investigations are planned by the Army.

Transfer Summary

Parcel Name: Buildings 1026, 1034, 1034A, 1037, 1037A, 1038 etc

Parcel Size: 8.60

Associated Sites:

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: NGB requires a letter from Ohio EPA indicating property acceptable for planned reuse.

Ohio EPA will not provide requested letter until investigations have occurred. No investigations are planned by the Army.

Parcel Name: Clean Hard Landfill

Parcel Size: 5.00

Associated Sites: RVAAP- 019- R- 01, RVAAP- 19

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: Ohio Army National Guard

Other Issues Affecting Transfer: N/A

Parcel Name: Cobbs Ponds

Parcel Size: 9.00

Associated Sites: RVAAP- 29

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: N/A

Transfer Summary

Parcel Name: Load Line 1

Parcel Size: 160.00

Associated Sites: RVAAP- 08

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: The following has been an issue for over six years: NGB declines property until slabs, aboveground walkways and foundations are removed in order to facilitate military training needs. Ohio EPA will not sign final ROD for this site without environmental investigations conducted post- slab removal. Funding for slab removal does not exist.

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau/Ohio Army National Guard

Other Issues Affecting Transfer: Sewer issues need to be resolved.

Parcel Name: Load Line 10

Parcel Size: 36.00

Associated Sites: RVAAP- 43

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: Sewer issues need to be resolved.

Parcel Name: Load Line 11

Parcel Size: 47.00

Associated Sites: RVAAP- 44

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: Sewer issues need to be resolved.

Transfer Summary

Parcel Name: Load Line 12

Parcel Size: 75.00

Associated Sites: RVAAP- 012- R- 01, RVAAP- 12

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: The following has been an issue for over six years: NGB declines property until foundations are removed in order to facilitate military training needs. Funding for foundation removal does not exist.

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: Sewer issues need to be resolved.

Parcel Name: Load Line 2

Parcel Size: 212.00

Associated Sites: RVAAP- 09

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: The following has been an issue for over six years: NGB declines property until slabs, aboveground walkways and foundations are removed in order to facilitate military training needs. Ohio EPA will not sign final ROD for this site without environmental investigations conducted post- slab removal. Funding for slab removal does not exist.

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: Sewer issues need to be resolved.

Parcel Name: Load Line 3

Parcel Size: 174.00

Associated Sites: RVAAP- 10

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: The following has been an issue for over six years: NGB declines property until slabs, aboveground walkways and foundations are removed in order to facilitate military training needs. Ohio EPA will not sign final ROD for this site without environmental investigations conducted post- slab removal. Funding for slab removal does not exist.

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: Sewer issues need to be resolved.

Transfer Summary

Parcel Name: Load Line 4

Parcel Size: 129.00

Associated Sites: RVAAP- 11

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: The following has been an issue for over six years: NGB declines property until slabs, aboveground walkways and foundations are removed in order to facilitate military training needs. Ohio EPA will not sign final ROD for this site without environmental investigations conducted post- slab removal. Funding for slab removal does not exist.

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: Sewer issues need to be resolved.

Parcel Name: Load Line 5

Parcel Size: 39.00

Associated Sites: RVAAP- 39

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: Sewer issues need to be resolved.

Parcel Name: Load Line 6

Parcel Size: 43.00

Associated Sites: RVAAP- 33, RVAAP- 033- R- 01

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: Sewer issues need to be resolved.

Transfer Summary

Parcel Name: Load Line 7

Parcel Size: 37.00

Associated Sites: RVAAP- 40

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: Sewer issues need to be resolved.

Parcel Name: Load Line 8

Parcel Size: 44.00

Associated Sites: RVAAP- 41

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: Sewer issues need to be resolved.

Parcel Name: Load Line 9

Parcel Size: 106.00

Associated Sites: RVAAP- 42

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: Sewer issues need to be resolved.

Transfer Summary

Parcel Name: Open Demolition Area #2
Parcel Size: 25.00
Associated Sites: RVAAP- 04, RVAAP- 004- R- 01
Transfer Date: N/A
Current Land Use: Other (Inactive Excess, Army Ammunition Plant)
Future Land Use: Other (Military Training)
Encumbrances: N/A
Leases/Permits/Licenses: N/A
Transfer Strategy: Army Retained
Recipient Organization: National Guard Bureau
Other Issues Affecting Transfer: N/A

Parcel Name: Pistol Range
Parcel Size: 20.00
Associated Sites:
Transfer Date: N/A
Current Land Use: Other (Inactive Excess, Army Ammunition Plant)
Future Land Use: Other (Military Training)
Encumbrances: N/A
Leases/Permits/Licenses: 20060224
Transfer Strategy: Army Retained
Recipient Organization: National Guard Bureau
Other Issues Affecting Transfer: N/A

Parcel Name: Ramsdell Landfill
Parcel Size: 15.00
Associated Sites: RVAAP- 01, RVAAP- 001- R- 01
Transfer Date: N/A
Current Land Use: Other (Inactive Excess, Army Ammunition Plant)
Future Land Use: Other (Military Training)
Encumbrances: N/A
Leases/Permits/Licenses: N/A
Transfer Strategy: Army Retained
Recipient Organization: National Guard Bureau
Other Issues Affecting Transfer: N/A

Transfer Summary

Parcel Name: Wet Storage

Parcel Size: 36.00

Associated Sites: RVAAP- 45

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: N/A

Parcel Name: Winklepeck Burning Grounds

Parcel Size: 200.00

Associated Sites: RVAAP- 05

Transfer Date: N/A

Current Land Use: Other (Inactive Excess, Army Ammunition Plant)

Future Land Use: Other (Military Training)

Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Army Retained

Recipient Organization: National Guard Bureau

Other Issues Affecting Transfer: N/A

RAVENNA ARMY AMMUNITION PLANT

Non- BRAC Excess
Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database- Restoration (AEDB- R) Sites/Response Complete (RC) Sites: 52/22

Installation Site Types with Future and/or Underway Phases

- 3 Burn Area
(RVAAP- 02, RVAAP- 05, RVAAP- 49)
- 1 Contaminated Buildings
(RVAAP- 33)
- 1 Contaminated Soil Piles
(RVAAP- 48)
- 3 Disposal Pit/Dry Well
(RVAAP- 06, RVAAP- 28, RVAAP- 51)
- 1 Firing Range
(RVAAP- 32)
- 1 Industrial Discharge
(RVAAP- 46)
- 3 Landfill
(RVAAP- 01, RVAAP- 19, RVAAP- 34)
- 7 Spill Site Area
(PBC at Ravenna, RVAAP- 39, RVAAP- 40, RVAAP- 41, RVAAP- 42, RVAAP- 43, RVAAP- 44)
- 2 Storage Area
(RVAAP- 45, RVAAP- 50)
- 1 Surface Disposal Area
(RVAAP- 38)
- 8 Surface Impoundment/Lagoon
(RVAAP- 08, RVAAP- 09, RVAAP- 10, RVAAP- 11, RVAAP- 12, RVAAP- 13, RVAAP- 16, RVAAP- 29)
- 1 Unexploded Munitions/Ordnance
(RVAAP- 04)

Most Widespread Contaminants of Concern

Asbestos, Chemical weapon munitions/Chemical agent, Explosives, Metals, Munitions and explosives of concern, Munitions constituents, Nitrate/Nitrite, Polynuclear Aromatic Hydrocarbons, Semi- volatiles, White Phosphorous

Media of Concern

Groundwater, Sediment, Soil, Surface Water

Completed Remedial Actions (Interim Remedial Actions / Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY	Cost
RVAAP- 23	UNIT TRAINING EQUIPMENT SITE UST	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1989	TBD
RVAAP- 47	BUILDING T- 5301	FRA	REMOVAL	2000	TBD
RVAAP- 03	OPEN DEMOLITION AREA #1	IRA	EX SITU SOIL TREATMENT	2003	TBD
RVAAP- 34	SAND CREEK DISPOSAL ROAD LANDFILL	FRA	WASTE REMOVAL - SOLIDS (NON-SOILS)	2004	TBD
RVAAP- 51	DUMP ALONG PARIS-WINDHAM ROAD	FRA	WASTE REMOVAL - SOILS	2004	TBD
RVAAP- 51	DUMP ALONG PARIS-WINDHAM ROAD	IRA	WASTE REMOVAL - SOILS	2004	TBD

Total Environmental Restoration, Army (ER,A) Funding

Prior Funding: \$44,742.0 K
 Current Requirements: \$2,272.0 K
 Future Requirements: \$72,468.0 K
 All amounts are K\$.

IRP Summary

Duration of IRP

Year of IRP Inception: 198802

Estimated Date for Remedy- In- Place (RIP)/Response Complete (RC): 201409/201409

Date of IRP completion including Long Term Management (LTM): 204810

IRP Contamination Assessment

Contamination Assessment Overview

The contamination at RVAAP originated from past industrial activities associated with the production and demilitarization of large caliber projectiles, general-purpose bombs, and parts for these munitions. RVAAP produced munitions during World War II and the Korean and Vietnam Wars. The industrial operations at RVAAP consisted of 12 production areas known as Load Lines. Load Lines 1 through 4 (melt-pour Lines) were the primary sources of secondary explosives contamination such as TNT, HMX and RDX, which were melted and poured into projectiles and bombs. Load Line 1 and 12 were used for demilitarization of projectiles.

Load Line 1 was used to produce and recondition anti-tank mines. Workers would periodically use steam and hot water to hose down equipment and the floors and walls of buildings contaminated with explosive dust, spills, and vapors. The explosive-contaminated water from the cleaning, known as pink water, then drained out doorways and through floor drains onto the soils surrounding the buildings or was discharged into open ditches or ponds after being filtered through saw dust to remove suspended explosives. Waste explosives from the melt pour lines were routinely disposed of by open burning and detonation at other sites on the installation.

Load Lines 5 through 11 (fuze and booster) were used to manufacture fuzes, primers, and boosters while Load Line 12 housed the ammonium nitrate plant. Potential contaminants in Lines 5 through 11 include lead azide, mercury fulminate, lead styphnate, black powder, heavy metals, TNT, and Composition B. The amount of explosives used at the fuze and booster lines was much less than that used at the melt-pour lines because of the types of small munitions components made there. Also, the operations did not create as much waste and were cleaner due to the special handling procedures needed when working with the highly shock and heat sensitive primary explosives. Load Line 12 produced ammonium nitrate for explosives, fertilizers and aluminum chloride. It also was periodically used for demilitarization projects involving the melt-out of TNT and other secondary explosives from the bombs and projectiles. As in the other melt pour lines, these activities resulted in pink water being released to the soils, ditches, and ponds in and around the line. Other types of contaminated sites associated with past industrial activities at RVAAP include landfills, testing facilities, dumps, burial sites, a pistol range, storage facilities, a scrap yard, and decontamination buildings. Although not present at every one of these sites, the contaminants of potential concerns include primary and secondary explosives, propellants, heavy metals, volatile and semi-volatile organics, PCBs and pesticides. Industrial activities ceased in 1992 when RVAAP was declared excess.

RVAAP started the IRP in 1989. Currently there are 30 active sites of which 10 are under performance-based contracts (PBCs). The sites were given a Relative Risk Site Evaluation (RRSE) rating of high, medium, or low based on the results of limited sampling in 1996 and 1998. Sampling of the soil, sediment, surface water, and groundwater at many of the high sites and some of the medium sites has been performed as part of the remedial investigation process.

Well sampling conducted by Ohio EPA in 1997 and 1998 showed no off-post explosives contamination of residential wells.

A Phase I RI examined 11 high priority sites identified as RVAAP- 04, 05, 08, 09, 10, 11, 12, 13, 18, 19, and 29. A final RI report was issued in 1997. The study concluded that Load Lines 1- 4, and 12 appeared to be the most contaminated and contaminants were probably not migrating far from the sources in significant concentrations. The report recommended further study.

Results from more recent studies have for the most part confirmed that explosives and heavy metals are the most common contaminants and are generally located immediately around buildings in the load lines and in the ditches and ponds draining the sites. Less common contaminants include PCBs, SVOCs and propellants. These same contaminants have been detected in the water and sediment within the storm and sanitary sewers. Installation monitoring wells located to the southeast of Load Line 2 near the perimeter have shown trace amounts of explosives. Surface water and sediment samples indicate no significant levels of contaminants are migrating from the installation.

RI data are also available for some of the other sites used to support the main production activities. Limited data available from earlier efforts again show explosives and heavy metals to be the principle contaminants of potential concern at sites used to burn, dump, or bury explosive waste from the Load Lines. These contaminants are found in the soils at Winklepeck Burning Grounds, Open Demolition Area 2 and Erie Burning Grounds, and areas used to detonate and burn waste explosives. Erie Burning Grounds is a high quality wetland. Explosives, metals and some organics have been detected in the surface water and sediment at the site and downstream of the site.

Cleanup Exit Strategy

The Army will complete restoration of the sites at RVAAP using PBCs. All high sites have been placed under contract as of March 2005. A PBC is scheduled to be awarded in the future to achieve RIP/RC at the remaining medium and low RRSE sites. Long-term management will be performed on both a facility-wide and a site-by-site basis. No further action at all the sites will be achieved by ensuring there will be no unacceptable risk for the proposed future use by the OHARNG. (See Individual site Cleanup Strategies for details.)

IRP Previous Studies

	Title	Author	Date
1978	Installation Assessment of Ravenna Army Ammunition Plant. Report No. 132	USATHAMA	NOV- 1978
1989	Ravenna Army Ammunition Plant RCRA Facility Assessment Draft RR/VS1 Report	Jacobs Engineering Group, Inc	OCT- 1989
	Hazardous Waste Management Study No. 37- 26- 0442- 84: Phase 2 of AMC Open Burning/Open Detonation Groundwater Evaluation	USAEHA	OCT- 1989
1995	Installation Action Plan RVAAP- FY 1995	Mason and Hanger Corp.	JAN- 1995
1996	Facility- Wide Safety and Health Plan	SAIC	FEB- 1996
	Preliminary Assessment for the Ravenna Army Ammunition Plant (RVAAP)	SAIC	FEB- 1996
	Preliminary Assessment for the Characterization of Areas of Contamination	SAIC	FEB- 1996
	Installation Action Plan RVAAP- FY 1996	Mason and Hanger Corp.	MAR- 1996
	Action Plan for the Ravenna Army Ammunition Plant	SAIC	MAR- 1996
	Facility- Wide Sampling and Analysis Plan for the Ravenna Army Ammunition Plant	SAIC	APR- 1996
	Phase 1 Remedial Investigation Site Safety and Health Plan Addendum for High Priority Areas of Concern for RVAAP	SAIC	JUL- 1996
	Phase 1 Remedial Investigation Sampling and Analysis Plan Addendum for High Priority Areas of Concern for RVAAP	SAIC	JUL- 1996
	Final Facility- Wide Sampling and Analysis Plan Amendment No., SAIC, 8- Jul	SAIC	AUG- 1996
	Interim Measures Plan for the Open Detonation (OD) Grounds Hazardous Waste Treatment Unit	SAIC	AUG- 1996
	Installation Restoration Program (IRP) Management Plan	USAEC	DEC- 1996
1997	Public Meeting Briefing - Phase I RI of High Priority sites at the RVAAP	USACE	SEP- 1997
1998	Quality Control Plan for the phase II RI for Winklepeck Burning Grounds at RVAAP	USACE	JAN- 1998
	Installation Action Plan RVAAP- FY 1998	Mason and Hanger Corp.	FEB- 1998
	Sampling and Analysis Plan Addendum for the Phase II Remedial Investigation of the Winklepeck Burning Grounds (AOC- 05) and Determination of Facility- Wide Background at RVAAP	SAIC	APR- 1998
	Sampling and Analysis Plan Addendum for the Phase II Remedial Investigation of the Winklepeck Burning Grounds (AOC- 05) and Determination of Facility- Wide Background at RVAAP	SAIC	APR- 1998
	Site Safety and Health Plan Addendum for the Phase II Remedial Investigation of the Winklepeck Burning Grounds (AOC- 05) and Determination of Facility - Wide Background at RVAAP	SAIC	APR- 1998

IRP Previous Studies

Year	Title	Author	Date
1998	Sampling and Analysis Plan Addendum for the Groundwater Investigation of the Former Ramsdell Quarry Landfill (AOC- 01)	SAIC	JUN- 1998
	Site Safety and Health Plan Addendum for the Groundwater Investigation of the Former Ramsdell Quarry Landfill (AOC- 01) at RVAAP	SAIC	JUN- 1998
1999	Installation Action Plan RVAAP- FY 1999	Mark Patterson	MAR- 1999
	Sampling and Analysis Plan Addendum No. 1 for the Phase I Remedial Investigation of the Erie Burning Grounds (AOC- 02) at RVAAP	SAIC	JUL- 1999
	Sampling and Analysis Plan Addendum No. 1 for the Phase II Remedial Investigation of Load Line 1 (AOC- 08) at the Ravenna Army Ammunition Plant	SAIC	AUG- 1999
	Site Safety and Health Plan Addendum No. 1 for the Phase II Remedial Investigation of Load Line 1 (AOC- 08) at the Ravenna Army Ammunition Plant	SAIC	AUG- 1999
	Environmental Information Management Needs Assessment at RVAAP	SAIC	SEP- 1999
	Sampling and Analysis Plan Addendum No. 1 for the Phase I Remedial Investigation of Demolition Area 1 (RVAAP- 03)	SAIC	OCT- 1999
	Site Safety and Health Plan Addendum No. 1 for the Phase I Remedial Investigation of Demolition Area #1 (AOC- 03) at RVAAP	SAIC	OCT- 1999
	Sampling and Analysis Plan Addendum No. 1 for the Phase 1 Remedial Investigation of the NACA Test Area (AOC- 38) at the Ravenna Army Ammunition Plant	SAIC	OCT- 1999
	Site Safety and Health Plan Addendum No. 1 for the Phase I Remedial Investigation of the NACA Test Area (AOC- 38) at the Ravenna Army Ammunition Plant	SAIC	OCT- 1999
	Scope of Work for the Interim Removal Action and Decontamination & Demolition of Building T- 5301 (RVAAP- 47)	MKM Engineers, Inc.	DEC- 1999
2000	Installation Action Plan RVAAP- FY 2000	USACE	MAR- 2000
	Installation Action Plan RVAAP- FY 2001	USACE	MAR- 2000
	Final Report on the Groundwater Investigation of the Ramsdell Quarry Landfill (AOC- 01) at RVAAP	SAIC	AUG- 2000
	Site Safety and Health Plan Addendum No. 1 for the Phase II Remedial Investigation of Load Line 1 (AOC- 08) at the Ravenna Army Ammunition Plant	SAIC	AUG- 2000
	Installation Action Plan RVAAP- FY 2001	USACE	AUG- 2000
	Sampling and Analysis Plan Addendum No. 2 for the Phase II Remedial Investigation of Load Line 1 (AOC- 08) at the Ravenna Army Ammunition Plant	SAIC	SEP- 2000
	Sampling and Analysis Plan Addendum No. 1 for the Winklepeck Burning Grounds (AOC- 05) Feasibility Study at RVAAP	SAIC	OCT- 2000
	Site Safety and Health Plan Addendum No. 1 for the Winklepeck Burning Grounds (AOC- 05) Feasibility Study at RVAAP	SAIC	OCT- 2000

IRP Previous Studies

2000

Title	Author	Date
Installation Action Plan RVAAP- FY 2001	USACE	DEC- 2000

2001

Sampling and Analysis Plan Addendum for the Remedial Investigation of Load Line 11 (RVAAP- 44)	MKM Engineers, Inc.	JAN- 2001
Facility- Wide Sampling and Analysis Plan for Environmental Investigations	SAIC	MAR- 2001
Technical Memorandum Human Health and Ecological Risk Assessment Approach for the Load Line 1 (AOC- 08) and Load Line 12 (AOC- 12) Phase II Remedial Investigations at RVAAP	SAIC	MAR- 2001
Summary and Technical Assumptions for Area, Volume, and Cost Estimations for the Winklepeck Burning Grounds (AOC- 05) Strategic Plan Ravenna Army Ammunition Plant	SAIC	MAR- 2001
Phase II Remedial Investigation Report for the Winklepeck Burning Ground (AOC- 05) at RVAAP	SAIC	APR- 2001
Final Sampling & Analysis Plan Addendum for the Remedial Landfill Design/Removal Action at the Sand Creek Disposal Road Landfill (AOC- 34)	MKM Engineers, Inc.	APR- 2001
Final Site- specific Safety and Health Plan for the Remedial Design/Removal Action at the Sand Creek Disposal Road Landfill (AOC- 34)	MKM Engineers, Inc.	APR- 2001
Final Workplan for the Remedial Design/Removal Action at Sand Creek Disposal Road Landfill (AOC- 34)	MKM Engineers, Inc.	APR- 2001
Final Sampling & Analysis Plan Addendum for the Remedial Design/Removal Action at the Paris- Windham Road Dump (AOC- 51)	MKM Engineers, Inc.	APR- 2001
Final Site- Specific Safety and Health Plan for the Remedial Design/Removal Action at the Paris Windham Road Dump (AOC- 51)	MKM Engineers, Inc.	APR- 2001
Final Work Plan for the Remedial Design/Removal Action at the Paris- Windham Road Dump (AOC- 51)	MKM Engineers, Inc.	APR- 2001
Final Work Plan for the Phase II Remedial Investigation at the Upper and Lower Cobbs Pond (AOC 29)	MKM Engineers, Inc.	JUN- 2001
Final Sampling and Analysis Plan Addendum for the Phase II Remedial Investigation at the Upper and Lower Cobbs Pond (AOC- 29)	MKM Engineers, Inc.	JUL- 2001
Final Site- Specific Safety and Health Plan for the Phase II Remedial Investigation at the Upper and Lower Cobbs Pond (AOC- 29)	MKM Engineers, Inc.	JUL- 2001
Final Site- Specific Safety and Health Plan for the Remedial Investigation at Central Burn Pits (AOC- 49) at the Ravenna	MKM Engineers, Inc.	AUG- 2001
Final Work Plan for the Remedial Investigation at Central Burn Pits (AOC- 49) at the Ravenna Army Ammunition Plant	MKM Engineers, Inc.	AUG- 2001
Groundwater Assessment Plan for the Ramsdell Quarry Landfill (AOC- 01)	MKM Engineers, Inc.	SEP- 2001
Geophysical Survey Results Suspected Mustard Agent Burial Site RVAAP	SAIC	OCT- 2001
Phase I Remedial Investigation Report for the Erie Burning Grounds (AOC- 02) at RVAAP	SAIC	DEC- 2001
Phase I Remedial Investigation Report for the Demolition Area #1 (AOC- 03) at RVAAP	SAIC	DEC- 2001

IRP Previous Studies

Year	Title	Author	Date
2001	Final Work Plan for the Remedial Design/Removal Action at the Sand Creek Disposal Road Landfill (AOC- 34)	SAIC	DEC- 2001
	Phase 1 Remedial Investigation Report for NACA Test Area (AOC- 38) at the Ravenna Army Ammunition Plant	SAIC	DEC- 2001
2002	Installation Action Plan RVAAP- FY 2002	Mark Patterson	FEB- 2002
	Sampling and Analysis Plan Addendum No. 3 for the Biological Measurements at Winklepeck Burning Grounds (AOC- 05) at the Ravenna Army Ammunition Plant	SAIC	MAY- 2002
	Work Plan and Sampling and Analysis Plan Addenda for the Phase II Remedial Investigation of Demolition Area 2	SpecPro	JUN- 2002
	Work Plan and Sampling and Analysis Plan Addenda for the Phase II Remedial Investigation of Demolition Area 2	SpecPro	JUN- 2002
	Investigation- Derived Waste Characterization and Disposal Plan	SpecPro	NOV- 2002
	Installation Action Plan RVAAP- FY 2003	Mark Patterson	DEC- 2002
	Phase II Remedial Investigation Report for the Load Line 1 (RVAAP- 08) at RVAAP	SAIC	DEC- 2002
	Groundwater Monitoring Well Installation and Groundwater Sampling at the Suspected Mustard Agent Burial Site (RVAAP- 28)	SpecPro	DEC- 2002
2003	Final Compliance Monitoring Program for the Open Demolition Area #2 (RVAAP- 04)	MKM Engineers, Inc.	JAN- 2003
	Report on the Biological Field- Truthing Effort at Winklepeck Burning Grounds (AOC- 05)	SAIC	MAR- 2003
	RVAAP Applied Dried Paints at Load Lines 6 (AOC- 33) and 9 (AOC- 42) GCMS PCB Results	MKM Engineers, Inc.	APR- 2003
	RVAAP Facility Wide Ecological Risk Work Plan	USACE	APR- 2003
	Phase II Remedial Investigation Report for the Load Line 1(RVAAP- 08) at RVAAP	SAIC	APR- 2003
	Installation Action Plan RVAAP- FY 2004	Mark Patterson	JUN- 2003
	Phase II Remedial Investigation Report for the Load Line 1 (RVAAP- 08) at RVAAP	SAIC	JUN- 2003
	Phase II Remedial Investigation Report for the Load Line 1 (RVAAP- 08) at RVAAP	SAIC	JUN- 2003
	Safety and Health Plan for the Remedial Investigation of Load Lines 6 (RVAAP- 33) and 9 (RVAAP- 42)	MKM Engineers, Inc.	JUL- 2003
	Community Relations Plan	USACE	SEP- 2003
	Safety and Health Plan for the Remedial Investigation of Load Lines 6 (RVAAP- 33) and 9 (RVAAP- 42)	MKM Engineers, Inc.	SEP- 2003
	Sampling and Analysis Plan Addendum for the Remedial Investigation of Load Line #6 (RVAAP- 33)	MKM Engineers, Inc.	SEP- 2003
	Sampling and Analysis Plan Addendum for the Remedial Investigation of Load Line #9 (RVAAP- 42)	MKM Engineers, Inc.	SEP- 2003
	Sampling and Analysis Plan Addendum No. 1 for the Phase I Remedial Investigation of Ramsdell Quarry Landfill (AOC- 01) at RVAAP	SAIC	OCT- 2003
	Site Safety and Health Plan Addendum No. 1 for the Phase I Remedial Investigation of Ramsdell Quarry Landfill	SAIC	OCT- 2003

IRP Previous Studies

2003	Title	Author	Date
	Sampling and Analysis Plan Addendum No 1 for the Phase II Remedial Investigation of the Erie Burning Grounds (RVAAP- 02)	SAIC	OCT- 2003
	Sampling and Analysis Plan Addendum No. 1 for the Phase II Remedial Investigation of the Erie Burning Grounds (AOC- 02) at RVAAP	SAIC	OCT- 2003
	Final Work Plan and Sampling and Analysis Plan Addenda for the Phase I/Phase II Remedial Investigation of the Fuze and Booster Quarry Landfill/Ponds at RVAAP	SpecPro	OCT- 2003
	Sand Creek Dump (AOC- 34) Cleanup Project Weekly Reports August - October 2003	MKM Engineers, Inc.	OCT- 2003
	Paris- Windham Dump (AOC- 51) Clean Up Project Weekly Reports, Photos, Misc Data April- October 2003	MKM Engineers, Inc.	OCT- 2003
	Decon- Demo Load Lines 6 (AOC- 33) and 9 (AOC- 42) Misc Corres, Reports, Photos at RVAAP	Unknown	DEC- 2003
2004			
	OEUXO Removal & Interim Removal Action Report For The Open Demolition Area #1 (RVAAP- 03)	MKM Engineers, Inc.	MAR- 2004
	Remedial Design/Removal Action Plan for Sand Creek Dump (AOC- 34)	MKM Engineers, Inc.	MAR- 2004
	Final Report Interim Removal Action at Load Line 11 (AOC- 44)	MKM Engineers, Inc.	MAR- 2004
	Interim Removal Action Report for Load Line #11 (AOC- 44) Vol 1 Main Text - Appendices A- G	MKM Engineers, Inc.	MAR- 2004
	Interim Removal Action Report for Load Line #11 (AOC- 44) Vol 2 Appendices H- I	MKM Engineers, Inc.	MAR- 2004
	Final Report for Remedial Design/Removal Action at Paris- Windham Road Dump (AOC- 51) at Ravenna Army Ammunition Plant	MKM Engineers, Inc.	MAR- 2004
	Installation Action Plan RVAAP- FY 2005	Mark Patterson	MAY- 2004
	Facility- Wide Biological and Water Quality Study 2003	USACE	JUN- 2004
	Supplemental Baseline Human Health Risk Assessment	Shaw/SAIC	JUL- 2004
	Phase II Remedial Investigation Report for the Load Line 2 (AOC- 09) at the Ravenna Army Ammunition Plant, Volume 1 - Main Text	Shaw/SAIC	JUL- 2004
	Phase II Remedial Investigation Report for Load Line 3 (AOC- 10) at the Ravenna Army Ammunition Plant Volume 1 - Main Text	Shaw/SAIC	JUL- 2004
	Phase II Remedial Investigation Report for Load Line 3 (AOC- 10) at the Ravenna Army Ammunition Plant Volume 2 - Appendices A- S	Shaw/SAIC	JUL- 2004
	Work Plan for the Phase I MEC Density Survey of Winklepeck Burning Grounds (AOC- 05)	USATCES/MK	AUG- 2004
	Phase II Remedial Investigation Report for Load Line 4 (AOC- 11) at the Ravenna Army Ammunition Plant Volume 1 - Main Text	Shaw/SAIC	SEP- 2004
	Phase II Remedial Investigation Report for Load Line 4 (AOC- 11) at the Ravenna Army Ammunition Plant Volume 2 - Appendices A- S	Shaw/SAIC	SEP- 2004
	Facility- Wide Groundwater Monitoring Program Plan, Portage	Shaw	SEP- 2004
	Proposed Remedial Goal Options for Soil at Load Lines 1 (AOC- 08), 2 (AOC- 09), 3 (AOC- 10), and 4 (AOC- 11)	Shaw	SEP- 2004

IRP Previous Studies

2004

Title	Author	Date
at RVAAP		
Sampling and Analysis Plan for the Data Gap Analysis and Additional Sampling and Security, Emergency Response and Contingency Plan and Safety, Health and Emergency Response Plan for the Remediation of Soils at Load Lines 1 (AOC- 08), 2 (AOC- 09), 3 (AOC- 10), and 4 (AOC- 11) at RVAAP	Shaw	OCT- 2004
Final Sampling and Analysis Plan Addendum for the Characterization of 14 RVAAP AOCs at RVAAP	MKM Engineers, Inc.	OCT- 2004
Sampling and Analysis Plan for the Data Gap Analysis and Additional Sampling in Support of the Remediation of Soils at Load Lines 1 (AOC- 08), 2 (AOC- 09), 3 (AOC- 10), and 4 (AOC- 11) at RVAAP	Shaw	OCT- 2004
Final Site Safety and Health Plan Addendum for the Characterization of 14 RVAAP AOCs	MKM Engineers, Inc.	OCT- 2004

2005

Final November 2004 Sampling Completion Report for Load Lines 1 - 4	Shaw	FEB- 2005
Focused Feasibility Study for the Winklepeck Burning Grounds (AOC- 05) at RVAAP	SAIC	FEB- 2005
Phase I MEC Density Survey After Action Report At Winklepeck Burning Grounds (AOC- 05)	MKM Engineers, Inc.	MAR- 2005
Phase III Remedial Investigation Report for the Winklepeck Burning Grounds (AOC- 05) at RVAAP	SAIC	MAR- 2005
Phase III Remedial Investigation Report for the Winklepeck Burning Grounds (AOC- 05) at RVAAP	USACE	MAR- 2005
Final Work Plan for Phase II MEC Clearance and Munitions Response at Winklepeck Burning Grounds (AOC- 05)	MKM Engineers, Inc.	MAR- 2005
Final Site Safety and Health Plan for the Phase II MEC Clearance and Munitions Response at Winklepeck Burning Grounds (AOC- 05)	MKM Engineers, Inc.	MAR- 2005
Winklepeck Burning Grounds AutoCAD Figures for Phase I After Action Report	MKM Engineers, Inc.	MAR- 2005
Focused Feasibility Study for the Remediation of Soils at Load Lines 1 through 4 (AOC- 08) (AOC- 09) (AOC- 10) (AOC- 11) at the RVAAP	Shaw	MAY- 2005
Final Focused Feasibility Study for the Remediation of Soils at LLs 1- 4, RVAAP	Shaw	MAY- 2005
Focused Feasibility Study for the Remediation of Soils at Load Lines 1 through 4 (AOC- 08) (AOC- 09) (AOC- 10) (AOC- 11) at the RVAAP	Shaw	MAY- 2005
Phase I Remedial Investigation December 2004 Follow-On Groundwater Sampling at the Ramsdell Quarry Landfill (AOC- 01)	SAIC	JUN- 2005
Final Report on the Groundwater Monitoring Well Installation and Groundwater Sampling at the Suspected Mustard Agent Burial Site (RVAAP AOC- 28) - Main Report and Appendices A- H	SpecPro	JUL- 2005
Installation Action Plan RVAAP- FY 2006- Non Public Version	Mark Patterson	JUL- 2005
Final Report on the Groundwater Monitoring Well Installation and Groundwater Sampling at the Suspected Mustard Agent Burial Site (RVAAP AOC- 28)	SpecPro	JUL- 2005

IRP Previous Studies

2005

Title	Author	Date
Report on the Groundwater Monitoring Well Installation and Groundwater Sampling at the Suspected Mustard Agent Burial Site (RVAAP AOC- 28)	SpecPro	JUL- 2005
Final Proposed Plan for the Remediation of Soils at LL1- 4 (RVAAP- 08, RVAAP- 09, RVAAP- 10, RVAAP- 11)	Shaw	JUL- 2005
Proposed Plan for the Remediation of Soils at LL1- 4 (RVAAP- 08, RVAAP- 09, RVAAP- 10, RVAAP- 11)	Shaw	JUL- 2005
Final Report on the Groundwater Monitoring Well Installation and Groundwater Sampling at the Suspected Mustard Agent Burial Site (RVAAP AOC- 28)	SpecPro	JUL- 2005
Final Report Facility Wide Groundwater Monitoring Program April 2005 Sampling Event Report - Main Report and Appendices A- D	SpecPro	AUG- 2005
Final Report Facility Wide Groundwater Monitoring Program Sampling Event Report - Main Report and Appendices A- D	SpecPro	AUG- 2005
Site Safety and Health Plan for the Phase I MEC Density Survey of Winklepeck Burning Grounds (AOC- 05)	MKM Engineers, Inc.	AUG- 2005
Final Facility Wide Groundwater Monitoring Program Report on the July 2005 Sampling Event - Vol 1- Main Report	SpecPro Inc.	AUG- 2005
Final Facility Wide Groundwater Monitoring Program Report on the July 2005 Sampling Event- Vol 2- Appendices A- C	SpecPro Inc.	AUG- 2005
RVAAP/Ohio EPA Cooperative Agreement (CA) Work Plans	Various	AUG- 2005
Installation Action Plan RVAAP- FY 2006	Mark Patterson	SEP- 2005
Final Work Plan Containing Addendums(SAP,QAPP,SSHP,UXO) for Groundwater Monitoring Well Installation and Groundwater Sampling at the Suspected Mustard Agent Burial Site (AOC- 28)	SpecPro, Inc.	SEP- 2005
Final Remedial Investigation Report Central Burn Pits (RVAAP- 49)	SAIC/MKM	SEP- 2005
Final for the Remedial Investigation at Load Line 11 (AOC- 44)	MKM Engineers, Inc.	SEP- 2005
Final for the Remedial Investigation at Load Line 11 (AOC- 44) VOL 2	MKM Engineers, Inc.	SEP- 2005
Final for the Remedial Investigation at Load Line 11 (AOC- 44) VOL 3	MKM Engineers, Inc.	SEP- 2005
Final for the Remedial Investigation at Load Line 11 (AOC- 44) VOL 4	MKM Engineers, Inc.	SEP- 2005
Final for the Remedial Investigation at Load Line 11 (AOC- 44) VOL 5	MKM Engineers, Inc.	SEP- 2005
Final for the Remedial Investigation at Load Line 11 (AOC- 44) VOL 1	MKM Engineers, Inc.	SEP- 2005
Final for the Remedial Investigation at Load Line 11 (AOC- 44) VOL 2	MKM Engineers, Inc.	SEP- 2005
Phase I Remedial Investigation Report for the Ramsdell Quarry Landfill at RVAAP	SAIC	SEP- 2005
Phase I Remedial Investigation Report for the Ramsdell Quarry Landfill (AOC- 01) at RVAAP	SAIC	SEP- 2005
Final for the Phase II Remedial Investigation at the Upper and Lower Cobbs Pond (AOC 29) Vol 1	MKM Engineers, Inc.	SEP- 2005
Final for the Phase II Remedial Investigation at the	MKM Engineers, Inc.	SEP- 2005

IRP Previous Studies

2005	Title	Author	Date
	Upper and Lower Cobbs Pond (AOC 29) Vol 2		
	Final for the Phase II Remedial Investigation at the Upper and Lower Cobbs Pond (AOC 29) Vol 3	MKM Engineers, Inc.	SEP- 2005
	Final Phase II Remedial Investigation Report for the Erie Burning Grounds (AOC- 02) at RVAAP	SAIC	SEP- 2005
	Final Phase II Remedial Investigation Report for the Open Demolition Area #2 (AOC- 4) Vol 2	SpecPro/SAIC	SEP- 2005
	Final Proposed Plan for the Winklepeck Burning Grounds	SAIC	OCT- 2005
	Facility- Wide Biological and Water Quality Study 2003, Part 1- Streams, Part 2- Ponds	USACE	NOV- 2005
	Final Phase II Remedial Investigation Supplemental Report for Load Line 12 (AOC- 12)	SAIC	NOV- 2005
	Final Phase II Remedial Investigation Supplemental Report for Load Line 12 at RVAAP	SAIC	NOV- 2005
	Final Sampling and Analysis Plan Addendum No. 1 Supplemental Phase II Remedial Investigations (RVAAP- 04) ODA#2, (RVAAP- 16) F&BQLP, and (RVAAP- 49) CBPs	SAIC	NOV- 2005
	Final Report Phase III Remedial Investigation of the Fuze & Booster Quarry Landfill/Ponds (RVAAP- 16) Volume One - Main Report	SpecPro/SAIC	NOV- 2005
	Final Report Phase III Remedial Investigation of the Fuze & Booster Quarry Landfill/Ponds (RVAAP- 16) Volume Two - Appendices A- K	SpecPro/SAIC	NOV- 2005
	Final Facility Wide Groundwater Monitoring Program Report on the July 2005 Sampling Event- Main Report and Appendices A- C	SpecPro	NOV- 2005
	Final Proposed Plan for the Winklepeck Burning Grounds	SAIC	DEC- 2005
	Phase II MEC Clearance and Munitions Response at Winklepeck Burning Grounds (AOC- 05)	MKM Engineers, Inc.	DEC- 2005
	Phase II MEC Clearance and Munitions Response at Winklepeck Burning Grounds (AOC- 05)	MKM Engineers, Inc.	DEC- 2005
2006			
	Sampling and Analysis Plan Addendum No. 2 for the Winklepeck Burning Grounds Feasibility Study at RVAAP	SAIC	FEB- 2006
	Final FS for Ramsdell Quarry Landfill	SAIC	JUL- 2006
	Final FS for Load Line 12	SAIC	JUL- 2006
	Final FS for Fuze- Booster Quarry Pond Landfill	SAIC	JUL- 2006
	Facility- Wide Ground Water Sampling Event #1	SpecPro	AUG- 2006
	Revised ECO Field Truthing Report	SAIC	SEP- 2006
	Final RI Addendum for ODA#2	SAIC	SEP- 2006
	Final RI Addendum for Erie Burning Grounds	SAIC	SEP- 2006
	Final P&A After Action Report for Ramsdell Quarry Landfill	SAIC	SEP- 2006
	Facility- Wide Ground Water Sampling Event #2	SpecPro	OCT- 2006
2007			
	Final EE/CA for Central Burn Pits	SAIC	JAN- 2007
	Final Structural Analysis report for Load Lines 1 through 4	Shaw	JAN- 2007

IRP Previous Studies

2007

Title	Author	Date
Facility- Wide Ground Water Sampling Event #3	SpecPro	MAR- 2007
Final Record of Decision issued for signatures	Shaw	JUN- 2007

RAVENNA ARMY AMMUNITION PLANT

Non- BRAC Excess

Installation Restoration Program

Site Descriptions

Site ID: PBC at Ravenna
Site Name: PBC (2003 and 2005)

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Explosives, Metals

Media of Concern: Sediment, Soil

Phases	Start	End
PA.....	200308.....	200308
RA(C).....	200310.....	200809
LTM.....	200810.....	201409

RIP Date: N/A

RC Date: 200809

SITE DESCRIPTION

PBC site to program USACE oversight funding requirements. Phases are being tracked under the individual sites which are RVAAP- 08, 09, 10, and 11 (PBC 2003 - Load Lines 1, 2, 3, and 4) and RVAAP- 01, 02, 04, 12, 16 and 49 (PBC 2005).

CLEANUP/EXIT STRATEGY

See the individual site cleanup strategies. Groundwater and surface water/sediment will be addressed under a separate contract (2008+).

PBC 2003 - Load Lines 1 through 4 interim remedial field work (soil and dry sediment) expected to be substantially complete by September 2007.

PBC 2005 - PBC sites expected to achieve interim remedial field work completion by June 2009, pending resolution of LUC issues.

STATUS

Parcel: Ramsdell Landfill

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Explosives, Metals, Semi- volatiles

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	200306.....	200712
RD.....	200707.....	200801
RA(C).....	200707.....	200909
LTM.....	200909.....	202009

RIP Date: N/A

RC Date: 200909

SITE DESCRIPTION

RVAAP- 01 (Ramsdell Quarry Landfill) is located in the eastern section of the RVAAP facility and is a 4- hectare (10- acre) unlined landfill, with a 5.5 to 6.1 meters- (18 to 20 foot-) depth, in part of an abandoned quarry. The quarry is excavated to the underlying Sharon Sandstone/Conglomerate. The depth of the soil in the remaining portion of the quarry varies from none to several feet. A pool of water is intermittently present at the bottom of the quarry at approximately 10.7 meters (35 feet) below ground surface (BGS).

This landfill was used from 1941 to 1989. During the period of 1946 to 1950 the site was used as a land- surface burning site to thermally destroy waste explosives from Load Line 1 and napalm bombs. From 1976 to 1989, a portion of the site was used strictly as a non- hazardous solid waste landfill. No historical information has been located for 1950 to 1976. The landfill ceased operation in September 1989. Closure of the landfill was completed in May 1990 under State of Ohio solid waste regulations. Because this unit is unlined, there is potential for releases from the landfill to surrounding soils and groundwater.

Landfilled material is variable domestic, commercial, industrial, and solid wastes including but not limited to explosives (TNT, Composition B), napalm, gasoline, acid dip liquor, annealing residue (sulfuric acid, shell casings, sodium ortho silicate, chromic acid and alkali), aluminum chloride, and inert material. The volume of landfilled material is unknown (Jacobs Engineering 1989).

Five groundwater monitoring wells were installed around the landfill perimeter in 1988. These wells were regulatorily decommissioned in 2006. New wells were installed in 1998 to further investigate the nature and extent of groundwater contamination at the landfill. A report of findings was published in October 1998.

Additional wells were installed and soil, sediment and surface water samples were taken in fall 2003 to further determine the nature and extent of the contamination of the CERCLA portion of the quarry. The new wells are monitored on a regular basis as part of the facility- wide groundwater monitoring program. Low levels of explosives and metals have been detected in groundwater. The groundwater unit was transferred from RCRA solid waste program to CERCLA in February 2005.

A final RI/FS was completed and approved.

Future OHARNG use is to be restricted access. A performance- based contract was awarded in 2005 to complete the investigation and any required remediation in accordance with the Defense Planning Guidance. MEC is present at the site and will be addressed under the MMRP site RVAAP- 001- R- 01.

CLEANUP/EXIT STRATEGY

The PP public comment period is planned for FY07. This site will be transferred to NGB following a limited remedial cleanup and MMRP resolution. Groundwater monitoring will continue until 2020 in accordance with the Ohio post- closure requirements. Cap maintenance will continue until 2020 (OMA funded). Future use by the OHARNG will be restricted access - no digging. LTM consisting of land use controls, annual inspection of signs and stakes will continue indefinitely.

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Explosives, Metals, Semi- volatiles

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	199810.....	200712
LTM.....	200809.....	201309

RIP Date: N/A

RC Date: 200712

SITE DESCRIPTION

This 35- acre site was used for open burning on the ground surface during the late 1940s and early 1950s. This site is a wetland. Bulk, obsolete, off- spec propellants, conventional explosives, rags, and large explosive- contaminated items were burned at this location. The ash residue from burning activities was left at the site. MEC is present at the site and will be addressed under the MMRP site RVAAP- 002- R- 01. IRP constituents of concern at this location include explosives, SVOCs, and heavy metals. There is a potential for release of contaminants from this unit to the surrounding soils, surface water/sediment and groundwater.

The site was transferred to the NGB in May 1999. An RI/FS was completed in 2006. This is one of the six sites in the FY05 PBC.

CLEANUP/EXIT STRATEGY

The PP public comment period is planned for FY07. The site will be response complete by December 2007. Future use by the OHARNG will be restricted access with no digging. Currently this area is used for permitted wetlands access for waterfowl hunting and trapping. Future OHARNG land uses include using water for fire suppression, dust control, and trapping. Five years of groundwater monitoring will be performed.

STATUS

Parcel: Open Demolition Area #2

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Explosives, Metals, White Phosphorous

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	200109.....	200712
LTM.....	200712.....	201309

RIP Date: N/A

RC Date: 200712

SITE DESCRIPTION

This site was used since 1948 to destroy large caliber munitions and off- specification bulk explosives that could not be deactivated or demilitarized by any other means due to their condition. Detonation was performed in a pit with a minimum depth of 4 feet. After detonation, metal parts were collected and removed from the site. The CERCLA (IRP) portion of the site is approximately 25 acres in size. Contaminants of concern at this site are white phosphorus, explosives and metals. Sand Creek bisects the site.

The RI/FS was completed in 2006. This is one of the six sites in the FY05 PBC.

There is a smaller 1.5 acre area on the north side of Sand Creek regulated under RCRA and the Directors Final Findings & Orders. This area was regularly used until 1992 for demolition activities. This area is not eligible for ER,A funding and is being managed under BRAC- OMA. Four groundwater monitoring wells are currently sampled on a quarterly basis. Low levels of explosives have been periodically detected in RCRA wells within this site. OMA funding was used in 1999 and 2000 to remove MEC to a depth of 4 ft in the area of the 1.5- acre RCRA unit.

The MEC portion of this site is eligible for the Military Munitions Response Program (RVAAP- 004- R- 01).

CLEANUP/EXIT STRATEGY

The site will be response complete by December 2007. Long- term management will follow. Future OHARNG use will be restricted access with no digging.

Interim and final land use controls will be conducted under site RVAAP- 004- R- 01.

When no longer in use, the 1.5 acre RCRA unit will be closed under RCRA or other applicable laws.

Site Name: WINKLEPECK BURNING GROUNDS

STATUS

Parcel: Winklepeck Burning Grounds

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Explosives, Metals, Semi- volatiles

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	199410.....	200707
RD.....	200610.....	200711
RA(C).....	200707.....	200808
LTM.....	200810.....	203810

RIP Date: N/A

RC Date: 200808

SITE DESCRIPTION

The Winklepeck Burning Grounds consists of approximately 200 acres and was in operation from 1948 to 1998. Prior to 1980, open burning was carried out in pits, pads, and sometimes on the roads within the 200- acre area. Burning was conducted on the bare ground and the ash was abandoned at the site. Prior to 1980, RDX, antimony sulfide, Composition B, lead azide, TNT, propellants, black powder, waste oils, sludge from the load lines, domestic wastes and small amounts of laboratory chemicals were burned. Munitions and explosive constituents (primarily scrap metal) are present at the site. From 1980- 98, burning of scrap explosives, propellants and explosive- contaminated materials was conducted in raised, refractory- lined trays within a 1.5- acre area.

The Army notified Ohio EPA of the intent to withdraw the Part B permit application in 1994. The burn trays along with the 90- day storage unit, Building 1601, were closed in accordance with Ohio EPA guidance in 1998.

The deactivation furnace soils were transferred to this AOC by the Director's Final Findings & Orders, June 2004. Groundwater monitoring will be handled under the Facility- wide Groundwater Monitoring Program.

The RI/FS is complete. The proposed plan was presented in 2005 and the ROD is in preparation.

Approximately 180 acres were transferred to the NGB in 2005 for the construction of a Mark 19 grenade machine gun range. The remaining 20 acres contains three burn pad locations that will be remediated prior to transfer.

A limited MEC environmental cleanup of a portion of the site was conducted in 2004 and 2005.

CLEANUP/EXIT STRATEGY

Explosive contamination has been found in some monitoring wells and will require continued monitoring under the facility- wide groundwater monitoring program.

LTM consisting of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

The future land use is a Mark 19 (grenade machine gun) Range.

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Metals, Semi- volatiles, Volatiles

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	200408.....	201102
RD.....	201102.....	201110
RA(C).....	201109.....	201306
LTM.....	201310.....	204309

RIP Date: N/A

RC Date: 201306

SITE DESCRIPTION

This site is an abandoned quarry approximately 0.3 acres in size. The site was used as a disposal area for annealing process wastes (chromic acid) for a short time during the 1950s. Liquid wastes were apparently dumped on the ground in the pit bottom. The site is now heavily forested with trees of one foot diameter or larger. IRP constituents of concern include metals, SVOCs, VOCs and propellants.

This site was transferred to NGB in May 1999.

This is one of 14 sites that was investigated in FY04- FY05 to provide data for a future contract.

CLEANUP/EXIT STRATEGY

A final characterization report will be completed in FY07. This report will be used to procure a future PBC for this site. This PBC will take this site to RIP/RC. Soil removal, followed by groundwater sampling, is anticipated. Future use of the site is restricted access with no digging.

LTM will consist of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

STATUS

Parcel: Load Line 1

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Explosives, Metals, Semi- volatiles

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	199410.....	201205
RD.....	200309.....	201304
IRA.....	200309.....	200806
RA(C).....	200309.....	201409
LTM.....	201409.....	204411

RIP Date: N/A

RC Date: 201409

SITE DESCRIPTION

Load Line 1 was used between 1941 and 1971 to melt and load TNT and Composition B into large- caliber projectiles. It was also used for the demilitarization of projectiles and to produce and recondition anti- tank mines. Workers would periodically use steam and hot water to hose down equipment and the floors and walls of buildings contaminated with explosive dust, spills, and vapors. Wash- down water and wastewater from the load line operations were collected in concrete sumps, pumped through sawdust filtration units and then discharged to a settling pond. Building wash- down water from the melt- pour buildings was also swept out through doorways onto the ground surrounding the buildings. The settling pond was an unlined earthen impoundment approximately 1 acre in size. Water from the impoundment was discharged to a surface stream that exited the installation. This area was also used as a demilitarization area. Contaminants of concern at this site are explosive compounds, SVOCs and heavy metals. The media of concern include soils, surface water, sediment and groundwater. Most above ground structures were demolished during 2000. Environmental controls were used during the demolition activities to prevent migration of contaminants to the environment.

A PBC was awarded to Shaw Environmental in September 2003 to complete an interim soil and sediment removal action at Load Lines 1, 2, 3 and 4. The RI/FS and PP are complete and the ROD is underway. MEC will be addressed under MMRP site RVAAP-008- R- 01.

CLEANUP/EXIT STRATEGY

This site is anticipated to be transferred to NGB in 2014.

Interim Remedy: The FY03 PBC project consists of a soil and dry sediment removal, but will leave slabs and concrete foundations in place, followed by five years of long- term management.

Final: All concrete foundations and walkways will be removed. Sewage and drainage infrastructure will also need to be addressed. Additional investigations and possible remediation of the soils under the inaccessible portions of the buildings will be needed after slabs and concrete foundations are removed.

Future land use by the OHARNG will involve armored vehicle maneuvering, with no digging. Soils may be disturbed to a depth of four feet.

LTM consisting of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

Currently, part of this area, known as Criggy's Pond, is used for permitted wetlands access for waterfowl hunting.

STATUS

Parcel: Load Line 2

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Explosives, Metals, Semi- volatiles,
Volatiles

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	200010.....	201205
RD.....	200309.....	201304
IRA.....	200309.....	200806
RA(C).....	200309.....	201409
LTM.....	201411.....	204411

RIP Date: N/A

RC Date: 201409

SITE DESCRIPTION

Load Line 2 was used between 1941 and 1971 to melt and load TNT and Composition B into large- caliber projectiles. Building wash- down water and wastewater from the load line operations were collected in concrete sumps, pumped through sawdust filtration units and then discharged to a settling pond. Building wash- down water from the melt- pour buildings was also swept out through doorways onto the ground surrounding the buildings. The settling pond was an unlined triangular- shaped pond approximately 2 acres in size and 6 to 8 ft deep. Water from the impoundment was discharged to a surface stream that exited the installation. Contaminants of concern at this site are explosive compounds, VOCs, SVOCs and heavy metals.

A PBC was awarded to Shaw Environmental in September 2003 to complete an interim soil and sediment removal action at the Load Lines 1, 2, 3 and 4. The RI/FS and PP are complete and the interim ROD is underway.

CLEANUP/EXIT STRATEGY

This site is anticipated to be transferred to NGB in 2014.

Interim Remedy: The FY03 PBC project consists of a soil and dry sediment removal, but slabs and concrete foundations will be left in place, followed by five years of long- term management.

Final: All concrete foundations and walkways will be removed. Sewage and drainage infrastructure will also need to be addressed. Additional investigations and possible remediation of the soils under the inaccessible portions of the buildings will be needed after slabs and concrete foundations are removed.

BRAC is removing all remaining buildings except slabs and foundations.

Future land use by the OHARNG will involve armored vehicle maneuvering, with no digging. Soils may be disturbed to a depth of four feet.

LTM consisting of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

Currently, part of this area, known as Kelly's Pond, is used for permitted wetlands access for waterfowl hunting and trapping. Future OHARNG uses include using water for fire suppression, dust control, trapping and fishing.

STATUS

Parcel: Load Line 3

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Explosives, Metals, Semi- volatiles,
Volatiles

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	200010.....	201205
RD.....	200309.....	201304
IRA.....	200309.....	200806
RA(C).....	200309.....	201409
LTM.....	201409.....	204411

RIP Date: N/A

RC Date: 201409

SITE DESCRIPTION

Load Line 3 was used between 1941 and 1971 to melt and load TNT and Composition B into large- caliber projectiles. Building wash- down water and wastewater from the load line operations were collected in concrete sumps, pumped through sawdust filtration units and then discharged to a drainage ditch leading to a settling pond. Building wash- down water from the melt- pour buildings was also swept out through doorways onto the ground surrounding the buildings. Contaminants of concern at this site are explosive compounds, VOCs, SVOCs and metals. Media of concern include soils, surface water, sediment and groundwater.

A PBC was awarded to Shaw Environmental in September 2003 to complete an interim soil and sediment removal action at Load Lines 1, 2, 3 and 4. The RI/FS and PP are complete and the interim ROD is underway.

CLEANUP/EXIT STRATEGY

This site is anticipated to be transferred to NGB in 2014.

Interim Remedy: The FY03 PBC project consists of a soil and dry sediment removal, but slabs and concrete foundations will be left in place, followed by five years of long- term management.

Final: All concrete foundations and walkways will be removed. Sewage and drainage infrastructure will also need to be addressed. Additional investigations and possible remediation of the soils under the inaccessible portions of the buildings will be needed after slabs and concrete foundations are removed.

BRAC is removing all remaining buildings except slabs and foundations.

LTM consisting of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

Future land use by the OHARNG will involve armored vehicle maneuvering, with no digging. Soils may be disturbed to a depth of four feet.

STATUS

Parcel: Load Line 4

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Explosives, Metals, Semi- volatiles,
Volatiles

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	200010.....	201205
RD.....	200309.....	201304
IRA.....	200309.....	200806
RA(C).....	200309.....	201409
LTM.....	201409.....	204411

RIP Date: N/A

RC Date: 201409

SITE DESCRIPTION

Load Line 4 was used between 1941 and 1971 to melt and load TNT and Composition B into large- caliber projectiles. Building wash- down water and wastewater from the load line operations were collected in concrete sumps, pumped through sawdust filtration units and then discharged to a settling pond. Building wash- down water from the melt- pour buildings was also swept out through doorways onto the ground surrounding the buildings. The settling pond was an unlined pond approximately 2 acres in size and 6 to 8 feet deep. Water from the impoundment was discharged to a surface stream that exited the installation. Contaminants of concern at this site are explosive compounds, VOCs, SVOCs and heavy metals.

A PBC was awarded to Shaw Environmental in September 2003 to complete an interim soil and sediment removal action at Load Lines 1, 2, 3 and 4. The RI/FS and PP are complete and the interim ROD is underway.

CLEANUP/EXIT STRATEGY

This site is anticipated to be transferred to NGB in 2014.

Interim Remedy: The FY03 PBC project consists of a soil and dry sediment removal, but slabs and concrete foundations will be left in place, followed by five years of long- term management.

Final: All concrete foundations and walkways will be removed. Sewage and drainage infrastructure will also need to be addressed. Additional investigations and possible remediation of the soils under the inaccessible portions of the buildings will be needed after slabs and concrete foundations are removed.

BRAC is removing all remaining buildings except slabs and foundations.

LTM will consist of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

Future land use by the OHARNG will involve armored vehicle maneuvering, with no digging. Soils may be disturbed to a depth of four feet.

Currently, part of this area, known as Load Line 4 Pond, is used for permitted wetlands access for waterfowl hunting and trapping. Future end uses include using water for fire suppression, dust control, trapping and fishing.

STATUS

Parcel: Load Line 12

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Explosives, Metals, Nitrate/Nitrite

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	199910.....	200711
RD.....	200701.....	200712
RA(C).....	200701.....	200807
LTM.....	200807.....	203809

RIP Date: N/A

RC Date: 200807

SITE DESCRIPTION

From 1941- 1943 and 1946- 1950, ammonium nitrate was produced at this site. From 1949 to 1993, munitions were periodically demilitarized. Building wash- down water and waste water from the bomb melt out facility operations was collected in a house gutter system, and flowed through a piping system to two stainless steel tanks. The first tank was used for settling and the second tank was used for filtration. Prior to the 1980s, the water leaked under the building and ponded there. Building wash- down water from Building F- 904 was also swept out through doorways onto the ground surrounding the building. After 1981, the water was treated in the Load Line 12 wastewater treatment system, which discharged to a pond. Contaminants of concern at this site are explosive compounds, nitrates and heavy metals. Media of concern include soil, surface water, sediment and groundwater. The NPDES permit for the original pink water treatment plant servicing Building F- 904 was revoked May 1, 2000 because there was no more discharge from the decommissioned plant.

In 2000, a composting pilot study was initiated using soils contaminated with explosives from the area of Building F- 904. This pilot bioremediation project was successful for remediation of explosives.

High levels of nitrates exceeding the MCL were detected in the groundwater at this site. Metals and explosives were detected in the soil, sediment and groundwater. Metals were detected in surface water. This is one of the six sites in the FY05 PBC.

A RI/FS was completed in 2006 for soil and dry sediment. A PP public comment period is planned for FY07. MEC will be addressed under MMRP site RVAAP- 012- R- 01.

CLEANUP/EXIT STRATEGY

This site is anticipated to be transferred to NGB in 2014.

The FY05 PBC project consists of a soil and dry sediment removal. The slabs and concrete foundations were removed to 1 foot below ground surface under a prior contract. All remaining concrete foundations will be removed. Sewage and drainage infrastructure will also need to be addressed.

Future land use by the OHARNG will involve armored vehicle maneuvering, with no digging. Soils may be disturbed to a depth of four feet.

LTM will consist of 30 years of GW monitoring as MNA; 5- year reviews and LUCs for 30 years are planned.

Site Name: BLDG 1200- DILUTION\SETTLING POND

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Explosives, Metals

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	200408.....	201104
RD.....	200909.....	201202
RA(C).....	201109.....	201202
LTM.....	201202.....	204202

RIP Date: N/A

RC Date: 201202

SITE DESCRIPTION

From approximately 1941 to 1971, ammunition was demilitarized at this building by steaming munitions rounds. The steam decontamination generated pink water, which drained to a man-made ditch. The ditch discharged into a 0.5-acre sedimentation pond, and the overflow from this pond discharged into Sand Creek. Contaminants of concern at this site are explosive compounds, propellants and metals. Media of concern include soil, surface water, sediment and groundwater.

This site was transferred to NGB in May 1999.

The buildings were demolished and all foundations and footings were removed.

This is one of 14 sites that was investigated in FY04- 05 to prepare for a future contract.

CLEANUP/EXIT STRATEGY

A final characterization report is being prepared. This report will be used to procure a future PBC for this site. This PBC will take this site to RIP/RC. Soil removal, followed by groundwater sampling, is anticipated. Future use of this land is dismantled training - with digging.

Site Name: FUZE & BOOSTER QUARRY LANDFILL/PONDS

STATUS

Parcel: 40 mm Test Range/Waterworks Ponds

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Explosives, Metals

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	200212.....	200711
RD.....	200506.....	200712
RA(C).....	200506.....	200807
LTM.....	200808.....	201308

RIP Date: N/A

RC Date: 200807

SITE DESCRIPTION

This site operated during the period 1945 through 1993. The site consists of three ponds in an abandoned rock quarry. The ponds are 20 to 30 feet deep and are separated by earthen berms. Prior to 1976, the quarry was reportedly used for open burning and as a landfill. The debris from the burning/landfill was reported to have been removed during pond construction. From 1976 to 1993, spent brine regenerate and sand filtration backwash water from one of the RVAAP drinking water treatment plants was discharged into the ponds. This discharge was regulated under a NPDES permit (revoked May 1, 2000). In 1998, this site was expanded to include three other shallow settling ponds and two debris piles, bringing the site to approximately 45 acres. The lands adjacent to the quarry were utilized as an impact area to test 40mm grenades and to incinerate/deactivate fuze and booster components.

IRP constituents of concern include explosives and metals in groundwater, soil, surface water and sediment.

An RI was completed in 2005 and an FS was completed in 2006. This is one of the six sites in the FY05 PBC.

CLEANUP/EXIT STRATEGY

This site is anticipated to be transferred to NGB following site cleanup and MEC remediation (RVAAP- 016- R- 01).

A RDRA of soil and dry sediment is planned. Future land use is mounted training with no digging.

Currently, this area is used for permitted wetlands access for waterfowl hunting and trapping. Future OHARNG uses include using water for fire suppression, dust control, trapping and fishing.

Site Name: LANDFILL NORTH OF WINKLEPECK BURN GRND

STATUS

Parcel: Clean Hard Landfill

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Metals, Munitions constituents, Semi-volatiles

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	200408.....	201104
RD.....	200909.....	201106
RA(C).....	201106.....	201206
LTM.....	201206.....	204206
RIP Date:	N/A	
RC Date:	201206	

SITE DESCRIPTION

This is an approximately 2.5- acre unlined landfill used for general refuse located upgradient of a wetland. The landfill operated from 1969 to 1976. The general appearance of the site suggests that a trench and fill method of operation was used for waste disposal. Waste types possibly associated with this landfill include: booster cups, aluminum liners, municipal waste, explosive and munitions waste and ash, and scrap metal from the Winklepeck Burning Grounds (RVAAP- 5).

This is one of 14 sites that was investigated in FY04- 05 to prepare for a future contract.

CLEANUP/EXIT STRATEGY

The final characterization report is being prepared. This report will be used to procure a future PBC for this site. This PBC will take this site to RIP/RC. Groundwater sampling is planned.

Approximately 2.5 acres of the site will receive a cover. LTM is cap maintenance, 5- year reviews, and future land use controls consisting of restricted access. Areas surrounding the landfill perimeter are available for dismantled training - no digging.

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Chemical weapon munitions/Chemical agent

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	200306.....	200809
LTM.....	200810.....	204810
RIP Date:	N/A	
RC Date:	200809	

SITE DESCRIPTION

This unit is a possible mustard agent burial site approximately 15 x 18 ft. In 1969, records indicate that an Explosive Ordnance Disposal Unit excavated a suspected mustard agent burial site near the west end of the NACA runway. One 190-liter (50 gallon) drum and seven rusty canisters were recovered. All recovered items were empty and no contamination was discovered.

The suspected area is now marked by reflective Seibert stakes. Two non-intrusive, geophysical surveys (EM-31, and EM-61) of the site were completed in 1998. Several areas were identified with metallic responses. Some, if not all, may be related to cultural features at or near the surface. Surface soil samples collected in 1998 contained no thiodiglycol (mustard breakdown product). There was no sign of disturbed soil or numerous buried metallic objects that would clearly delineate a formal burial site.

Groundwater samples were collected to test for mustard and mustard breakdown products in 2004. No mustard or mustard breakdown products were found. Groundwater monitoring is ongoing. This site was transferred to NGB in May 1999.

In 2006, additional wells were installed and sampled for mustard agent and breakdown products. No detections were reported.

A second suspected area was suggested by a member of the public.

CLEANUP/EXIT STRATEGY

The second suspected area will be investigated by using geophysics.

A Final Groundwater Investigation and No Further Action Record of Decision with monitoring for 5 years are expected. Future land use will be restricted access - no digging, marked by Seibert stakes. LTM consisting of 5 years of GW monitoring; 5-year reviews and LUCs for 30 years are planned.

Site Name: UPPER AND LOWER COBB PONDS

STATUS

Parcel: Cobbs Ponds

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Explosives, Metals

Media of Concern: Groundwater, Sediment, Surface Water

Phases	Start	End
PA.....	198802.....	198804
SI.....	198906.....	198906
RI/FS.....	200101.....	201001
LTM.....	201001.....	204001

RIP Date: N/A

RC Date: 201001

SITE DESCRIPTION

The site is comprised of approximately 5 acres (Upper Cobbs Pond) and 4 acres (Lower Cobbs Pond). The Upper and Lower Cobbs Ponds are unlined ponds currently used for recreational purposes and contain abundant fish and wildlife. A ponded area known as "a backwater area" is located south of Upper Cobbs Pond. This area, approximately 1 acre in size, was created by beaver activity and was not present during operations.

The Upper and Lower Cobbs Ponds were used as sedimentation basins for Load Line waste water effluent and stormwater runoff from 1941 to 1971. The Cobbs Pond complex received waste water effluent from Load Line 3 (RVAAP- 10) and Load Line 12 (RVAAP- 12). Waste types associated with this site include : TNT, RDX, HMX, Composition B, lead, chromium, mercury, and aluminum chloride.

The RI was completed in Oct 2005.

This site will be transferred to NGB.

CLEANUP/EXIT STRATEGY

The Proposed Plan and Record of Decision are scheduled for FY08.

No active remedial action is planned. LTM consisting of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned. If additional activities are required, they will be addressed in the future PBC contract

OHARNG future use will be dismantled training, with no digging.

Site ID: RVAAP- 32

Site Name: 40 MM FIRING RANGE

STATUS

Parcel: 40 mm Test Range/Waterworks Ponds

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals, Munitions and explosives of concern

Media of Concern: Soil

Phases	Start	End
PA.....	199407.....	199602
SI.....	199607.....	199612
RI/FS.....	200306.....	200901

RIP Date: N/A

RC Date: 200901

SITE DESCRIPTION

This site was used as a test firing range for 40 mm projectiles during the late 1960s and early 1970s. This site was reported by former workers at RVAAP to have been a test firing range for munitions. The dates of this operation were from 1969- 71. No original file documentation exists for the operation. UXO is suspected at this approximately 2- acre site.

The site is partially covered with pole timber. Soil samples collected by USACHPPM in 1996 detected arsenic and cadmium above the RRSE screening concentrations.

Additional samples were collected in the fall of 2003.

CLEANUP/EXIT STRATEGY

The Site Characterization Report is scheduled for completion in 2007. No removal action is planned for this site. The PP and ROD are planned in FY08. MEC concerns are addressed under RVAAP- 032- R- 01. The OHARNG future use will be mounted training with no digging.

STATUS

Parcel: Load Line 6

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Explosives, Metals

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	199407.....	199602
SI.....	199407.....	199901
RI/FS.....	200207.....	200909
RD.....	200909.....	201101
RA(C).....	201101.....	201203
LTM.....	201203.....	204203

RIP Date: N/A

RC Date: 201203

SITE DESCRIPTION

This site operated primarily as a fuze assembly line from 1941 to 1945, when it was deactivated. This site was also used as the Firestone Test Facility from 1950 until the late 1970s. It was reported by former workers at RVAAP to have been a security classified experimental test facility for munitions. Shaped charges were constructed and tested for the Department of Defense. The site consists of a pond (underwater test chamber) and several buildings (approximately 45 acres). The dates of operation are not known. No original file documentation exists for this site. The contaminants of potential concern are explosives and metals.

All buildings have been removed. The test chamber foundation and the concrete blocks around the test pond remain at the site. The preliminary Draft RI was completed in December 2005.

CLEANUP/EXIT STRATEGY

This site will be transferred to NGB. The PP and ROD are scheduled for FY10. MEC will be addressed under MMRP site RVAAP 033- R- 01. Soil removal is anticipated as part of the IRP, followed by LTM will consist of five years groundwater monitoring; with 5- year reviews and LUCs to follow for 30 years. Future OHARNG use is expected to be mounted training with no digging.

Sewage and drainage infrastructure will be addressed as needed.

Site Name: SAND CREEK DISPOSAL ROAD LANDFILL

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Metals, Semi- volatiles

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
PA.....	199407.....	199602
SI.....	199407.....	199906
RI/FS.....	200201.....	200208
RA(C).....	200209.....	200409
LTM.....	200410.....	204005

RIP Date: N/A

RC Date: 200409

SITE DESCRIPTION

This site was reported by former workers at RVAAP to have been an open dump for concrete, wood, asbestos debris, lab bottles, 55- gallon drums and fluorescent light tubes. Debris is at the surface, but covered by vegetation. The site is approximately 2.7 acres and located adjacent to Sand Creek. The dates of operation of this site are not known, but are believed to be around the 1950s.

Sediment and surface water samples indicated metals and SVOCs were leaching into Sand Creek, a State Resource Water.

Soil and debris removal (IRA) was completed in summer 2003. The IRA was documented in a report submitted in April 2004. This site was transferred to NGB in May 1999.

CLEANUP/EXIT STRATEGY

An analytical screening evaluation risk report is under review. The Proposed Plan and Record of Decision are scheduled for FY10. LTM will consist of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

OHARNG future use will be dismantled training with no digging.

All facility- wide project funding will be tracked under this site. These projects include:

- Risk Assessment Updates
- Facility- wide Groundwater Monitoring Program
- Ravenna Environmental Information Management System
- Property Management Plan (LUC)
- Facility Scheduling
- Facility- wide documents
- Project Management Plan
- Administrative Support
- Under slab soil and subsurface sampling

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals, Semi- volatiles

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	199508.....	199602
SI.....	199508.....	199812
RI/FS.....	199909.....	201010
RD.....	201006.....	201011
RA(C).....	201012.....	201112
LTM.....	201112.....	204112

RIP Date: N/A

RC Date: 201112

SITE DESCRIPTION

This is an approximately 12- acre site that was used as an aircraft test area by NACA. Surplus military aircraft were crashed into a barrier, using a fixed rail attached to the aircraft landing gear, in an attempt to develop crash- worthy fuel tanks and/or high flashpoint aviation fuel. Some of the aircraft were buried at the site after the tests. Open Demolition Area 1, RVAAP- 03, is located within the RVAAP- 38 boundary.

Low levels of metals and organics were detected in soil. Nitrocellulose was detected in the sediment. Additional study is needed. The Phase I RI was completed for NACA in 2002. This site was transferred to NGB in May 1999.

Twelve groundwater monitoring wells were installed and sampled in 2004. Analytical results indicated metals and low levels SVOCs.

CLEANUP/EXIT STRATEGY

The final characterization report is being prepared. Soil remediation, followed by groundwater sampling, is planned. Future use of this land is dismantled training with no digging.

LTM will consist of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

STATUS

Parcel: Load Line 5

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals, Semi- volatiles

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	199802.....	199806
SI.....	199807.....	199807
RI/FS.....	200408.....	201010
RD.....	200705.....	201011
RA(C).....	200704.....	201104
LTM.....	201104.....	204104

RIP Date: N/A

RC Date: 201104

SITE DESCRIPTION

This site operated from 1941 to 1945 to produce fuzes for artillery projectiles. Load Line 5 was deactivated and its equipment removed in 1945.

Metals and SVOCs above screening criteria were detected in soil, sediment, and surface water samples. Nitrates above screening criteria were also detected in surface water.

This is one of 14 sites that was investigated in FY04- FY05. Data collected will be used to develop a future contract.

The buildings, including slabs and foundations, were removed in FY07.

CLEANUP/EXIT STRATEGY

This site will be transferred to NGB.

The final characterization report is being prepared. Soil removal, followed by groundwater sampling, is planned.

Future use by the OHARNG consists of mounted training with no digging.

LTM will consist of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

Sewage and drainage infrastructure will be addressed as needed.

STATUS

Parcel: Load Line 7

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Explosives, Metals, Semi- volatiles, Volatiles

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	199802.....	199806
SI.....	199807.....	199807
RI/FS.....	200408.....	201108
RD.....	200704.....	201109
RA(C).....	200704.....	201204
LTM.....	201205.....	204205

RIP Date: N/A

RC Date: 201204

SITE DESCRIPTION

This site was used to assemble booster charges for artillery projectiles between 1941 and 1945. Load Line 7 (LL- 7) was deactivated and the equipment was removed in 1945. LL- 7 was used again in 1969 and 1970 to produce 40mm projectiles. Additionally, the LL- 7 Pink Water Treatment Plant was in operation between 1989 and 1993.

Metals, VOCs, SVOCs and explosives were detected in soil, sediment, surface water and groundwater above screening levels.

This is one of 14 sites that was investigated in FY04- FY05. Data collected will be used to develop a future contract.

The buildings, including slabs and foundations, were removed in FY07.

CLEANUP/EXIT STRATEGY

This site will be transferred to NGB.

The final characterization report is being prepared. Soil removal, followed by groundwater sampling, is planned.

Future use by the OHARNG consists of mounted training with no digging.

LTM will consist of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

Sewage and drainage infrastructure will be addressed as needed.

STATUS

Parcel: Load Line 8

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Explosives, Metals, Semi- volatiles,
Volatiles

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	199802.....	199806
SI.....	199807.....	199807
RI/FS.....	200408.....	201012
RD.....	200704.....	201101
RA(C).....	200704.....	201108
LTM.....	201109.....	204109

RIP Date: N/A

RC Date: 201108

SITE DESCRIPTION

This site was used to assemble booster charges for artillery projectiles between 1941 and 1945. Load Line 8 was deactivated and the equipment was removed in 1945.

Metals, VOCs, SVOCs and explosives were detected in soil, sediment, surface water and groundwater above screening levels.

This is one of 14 sites that was investigated in FY04- FY05. Data collected will be used to develop a future contract.

The buildings, including slabs and foundations, were removed in FY07.

CLEANUP/EXIT STRATEGY

This site will be transferred to NGB.

The final characterization report is being prepared. Soil removal, followed by groundwater sampling, is planned.

Future use by the OHARNG consists of mounted training with no digging.

LTM will consist of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

Sewage and drainage infrastructure will be addressed as needed.

STATUS

Parcel: Load Line 9

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Explosives, Metals

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	199802.....	199806
SI.....	199807.....	199807
RI/FS.....	200208.....	201008
RD.....	200704.....	201101
RA(C).....	200704.....	201203
LTM.....	201203.....	204204

RIP Date: N/A

RC Date: 201203

SITE DESCRIPTION

This site operated from 1941 to 1945 to produce detonators. Load Line 9 was deactivated and its equipment removed in 1945.

Limited samples collected in 2000 detected low levels (below 2%) of lead azide in sediment and surface water in the sumps. The buildings, including slabs and foundations were removed in 2003.

A preliminary draft RI was submitted in December 2005.

CLEANUP/EXIT STRATEGY

This site will be transferred to NGB. The PP and ROD are scheduled for FY10. Soil removal is planned, followed by LTM consisting of 5 years of GW monitoring, 5- year reviews, and LUCs for 30 years.

Future OHARNG use is expected to be mounted training with no digging.

STATUS

Parcel: Load Line 10

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Explosives, Metals, Semi- volatiles, Volatiles

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	199802.....	199806
SI.....	199807.....	199807
RI/FS.....	200408.....	201010
RD.....	200704.....	201011
RA(C).....	200704.....	201105
LTM.....	201106.....	204106
RIP Date:	N/A	
RC Date:	201105	

SITE DESCRIPTION

This site operated from 1941 to 1945 to produce percussion elements. Load Line 10 was placed on standby in 1945. From 1951 to 1957, LL- 10 produced primers and percussion elements. From 1969 to 1971, LL- 10 was used again to produce primers. It has been inactive since.

Metals, explosives, SVOCs, and VOCs have been detected in soil, sediment, surface water and groundwater above screening criteria.

This is one of 14 sites that was investigated in FY04- FY05. Data collected will be used to develop a future contract.

The buildings, including slabs and foundations, were removed in FY07.

CLEANUP/EXIT STRATEGY

This site will be transferred to NGB.

The final characterization report is being prepared. Soil removal, followed by groundwater sampling, is planned.

Future use by the OHARNG consists of mounted training with no digging.

LTM will consist of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

Sewage and drainage infrastructure will be addressed as needed.

STATUS

Parcel: Load Line 11

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Explosives, Metals, Volatiles

Media of Concern: Groundwater, Soil

Phases	Start	End
PA.....	199802.....	199806
SI.....	199807.....	199807
RI/FS.....	199910.....	201002
LTM.....	201002.....	204002

RIP Date: N/A

RC Date: 201002

SITE DESCRIPTION

This site operated from 1941 to 1945 to produce primers for artillery projectiles. Load Line 11 was placed on standby in 1945. From 1951 to 1957, LL- 11 was used to produce primers and fuzes.

The lead/asbestos- lined sumps, lead- contaminated sediments, and solvent- contaminated soils were removed during an IRA in 2001. The Final IRA report was completed in April 2004. Some of the sewer lines were also permanently plugged with grout to prevent migration of contaminants. The RI was completed in FY05 prior to demolition of the buildings. Demolition of the buildings occurred in FY05.

CLEANUP/EXIT STRATEGY

This site will be transferred to NGB.

Additional sampling in the footprint of the buildings is planned.

Future use by the OHARNG consists of mounted training with no digging.

LTM will consist of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

Sewage and drainage infrastructure will be addressed as needed.

STATUS

Parcel: Wet Storage

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Explosives, Metals, Semi- volatiles

Media of Concern: Soil

Phases	Start	End
PA.....	199802.....	199806
SI.....	199807.....	199807
RI/FS.....	200408.....	201004
RD.....	200909.....	201006
RA(C).....	201006.....	201106
LTM.....	201107.....	204107

RIP Date: N/A

RC Date: 201106

SITE DESCRIPTION

This site was used from 1941 to 1945 to store primary explosives in water- filled drums. There is no documentation concerning any spills in the area.

Contaminants of concern include metals and explosives.

Four of the six igloos were demolished in spring 2003- 2004.

This is one of 14 sites that was investigated in FY04- FY05. Data collected will be used to develop a future contract.

CLEANUP/EXIT STRATEGY

This site will be transferred to NGB.

A final site characterization report is being prepared.

A RD/RA, such as soil removal, may be needed. LTM will consist of 5- year reviews and LUCs for 30 years.

Future use by the OHARNG changed from mounted training with no digging to dismounted training with no digging.

Sewage and drainage infrastructure will be addressed as needed.

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Explosives, Metals, Semi- volatiles

Media of Concern: Soil, Surface Water

Phases	Start	End
PA.....	199802.....	199806
SI.....	199807.....	199807
RI/FS.....	200312.....	201104
RD.....	200909.....	201106
RA(C).....	201106.....	201206
LTM.....	201207.....	204207

RIP Date: N/A

RC Date: 201206

SITE DESCRIPTION

These buildings were used during World War II, the Korean Conflict and Vietnam War to test miscellaneous explosives. Quantities and exact dates of testing are unknown.

Metals, explosives and SVOCs have been detected in soil and surface water above screening criteria.

This site was transferred to NGB in May 1999.

This is one of 14 sites that was investigated in FY04- FY05 to provide data for a future contract.

Groundwater has not been investigated at this site.

MEC will be addressed under MMRP site RVAAP- 046- R- 01.

CLEANUP/EXIT STRATEGY

A final site characterization report is being prepared; it is planned that GW sampling will be needed.

A RD/RA, such as soil removal, may be needed. LTM will consist of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

Future use by the OHARNG consists of dismantled training with digging up to seven feet.

Foundations, slabs and footings will be removed (not ER,A eligible). Sewage and drainage infrastructure will be addressed as needed.

STATUS

Parcel: Anchor Test Area
Regulatory Driver: CERCLA
RRSE: MEDIUM
Contaminants of Concern: Metals
Media of Concern: Soil

Phases	Start	End
PA.....	199802.....	199806
SI.....	199807.....	199807
RI/FS.....	200408.....	201011
LTM.....	201012.....	204012
RIP Date:	N/A	
RC Date:	201011	

SITE DESCRIPTION

Limited information is known about this research and development area. It is believed that the site was used for testing of explosively driven soil anchoring devices. The dates of use for this site are unknown. It currently consists of several dirt mounds with a nearby sand pit (approximately 6 x 30 ft). There is metal debris in the area.

Metals have been detected in soil above screening levels.

This is one of 14 sites that was investigated in FY04- FY05 to provide data for a future contract.

MEC will be addressed under MMRP site RVAAP- 048- R- 01.

CLEANUP/EXIT STRATEGY

Four wells will be installed as part of the RI.

A final site characterization report is being prepared; it is planned that GW sampling will be needed.

LTM will consist of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

Future use by the OHARNG consists of dismounted training with no digging.

Site ID: RVAAP- 49

Site Name: CENTRAL BURN PITS

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals, Semi- volatiles

Media of Concern: Soil

Phases	Start	End
PA.....	199802.....	199806
SI.....	199807.....	199807
RI/FS.....	200010.....	200809
IRA.....	200704.....	200711
LTM.....	200809.....	201402

RIP Date: N/A

RC Date: 200809

SITE DESCRIPTION

This approximately 20- acre site was used for the burning of non- explosive scrap materials. The dates of operation for the site are unknown.

This site was transferred to NGB in May 1999.

The RI was completed in 2005. Metals and SVOCs were identified in two debris piles at levels which require removal.

This is one of the six sites in the FY05 PBC. An EE/CA was completed.

CLEANUP/EXIT STRATEGY

An IRA for surface debris piles removal is required, followed by 5 years of groundwater monitoring. Site is being cleaned up for unrestricted use. A PP/ROD for NFA will be developed.

OHARNG future use will be dismantled training.

Site ID: RVAAP- 50

Site Name: ATLAS SCRAP YARD

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Explosives, Metals, Semi- volatiles

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	199802.....	199806
SI.....	199807.....	199807
RI/FS.....	200408.....	200909
RD.....	200909.....	201105
RA(C).....	201012.....	201105
LTM.....	201110.....	204106

RIP Date: N/A

RC Date: 201110

SITE DESCRIPTION

This site (approximately 150 acres) is an old construction camp built to house workers during the construction of the plant. Facilities were demolished following World War II. Since that time, the area has been used as a scrap yard for miscellaneous materials.

Explosives, SVOCs and metals have been detected in soils, sediment, surface water and groundwater above screening levels.

This site was transferred to NGB in May 1999.

This is one of 14 sites that was investigated in FY04- FY05 to provide data for a future contract.

MEC will be addressed under RVAAP- 050- R- 01.

CLEANUP/EXIT STRATEGY

A final site characterization report is being prepared; it is planned that soil removal and groundwater sampling will be needed. LTM will consist of 5 years of GW monitoring; 5- year reviews and LUCs for 30 years are planned.

Sewage and drainage infrastructure will be addressed as needed.

Future use by the OHARNG consists of mounted training.

Site Name: DUMP ALONG PARIS- WINDHAM ROAD

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Asbestos, Polynuclear Aromatic Hydrocarbons

Media of Concern: Sediment, Soil

Phases	Start	End
PA.....	199802.....	199806
SI.....	199807.....	199807
RI/FS.....	200109.....	200206
RD.....	200209.....	200212
RA(C).....	200209.....	200409
LTM.....	201005.....	204005

RIP Date: N/A

RC Date: 200409

SITE DESCRIPTION

This AOC is an area adjacent to Sand Creek that was used as an open dump for miscellaneous materials, including transite siding. The dates of operation for the landfill are unknown. The surface soil and sediment pathways are considered complete at this site.

Surface water, sediment and biological samples have been collected in Sand Creek adjacent to the site. No detections above background were identified in the surface water and sediment. Biological samples reflected excellent stream quality.

Debris removal was complete in Jan 2004. Confirmation sampling detected PAHs and asbestos close to the road. Additional removal could not be done because the road integrity would be compromised.

CLEANUP/EXIT STRATEGY

All previous results of the supplemental investigation are being reviewed by the COE and the Ohio EPA.

No further remedial actions other than LUCs are planned at this time. A PPROD is scheduled.

IRP No Further Action Sites Summary

Site ID	Site Name	NFA Date	Documentation
RVAAP- 03	OPEN DEMOLITION AREA #1	200309	Site closeout documentation was initiated in FY03 and is expected to be completed in FY08.
RVAAP- 07	BLD 1601 HAZ WST STG	198906	Closure plan approval letter from Director of Ohio EPA, dated 02/12/1998 (with modifications). Letter from RVAAP responded with modified pages 06/26/2000. Closed under RCRA.
RVAAP- 14	LOAD LINE 6 EVAPORATION UNIT	198906	Operational from 1987- 1993. Not eligible for ER,A funding. Closure letter from Ohio EPA dated 20 Jan 2003
RVAAP- 15	LOAD LINE 6 TREATMENT PLANT	200001	Operational from 1987- 1993. Not eligible for ER,A funding.
RVAAP- 17	DEACTIVATION FURNACE	198906	The DFA was not closed under RCRA. Soils and groundwater were moved over to the CERCLA side of the house under the Directors Findings and Orders (see section VI (9) (c). Journalized date June 10, 2004. RCRA closure plan submitted 23 Feb 2001. Soils and GW are covered under Winklepeck (RVAAP- 05)
RVAAP- 18	LOAD LINE 12 WWT PLANT	199703	Operational until 1983. Revocation of NPDES permit effective May 1, 2000.
RVAAP- 20	SAND CREEK STP	198906	Operational until 1993. Letter from Director of Ohio EPA. NPDES permit revoked May 1, 2000.
RVAAP- 21	DEPOT STP	198906	Operational until 1983. NPDES permit revoked May 1, 2000.
RVAAP- 22	GEORGE RD STP	198906	Operational until 1983. NPDES permit revoked May 1, 2000.
RVAAP- 23	UNIT TRAINING EQUIPMENT SITE UST	198911	Closeout Letter from OSFM BUSTR dated 02/05/2003. Further investigation under Ohio ARNG CC Program.
RVAAP- 24	WASTE OIL TANK	198906	Not eligible for ER,A funding.
RVAAP- 25	BLD 1034 MOTOR POOL AST	198906	Not eligible for ER,A funding.
RVAAP- 26	FUZE BOOSTER AREA SETTLING TANKS	200001	15 tanks scattered among LL 5 (1 tank), 7 (1 removed in 1988), 9 (2 tanks), 10 (9 tanks- 1 AST, 8 USTs), 11 (3 tanks); all tanks emptied, cleaned and covered in 1971. Soils are being investigated in conjunction with site- specific media investigation/cleanup. (RVAAP- 39, - 40, - 42, - 43, & - 44)
RVAAP- 27	BUILDING 854, PCB STORAGE	198906	Letter from Ohio EPA dated September 1, 1999 stating NFA.
RVAAP- 30	LL 7 TREATMENT PLANT	200001	Operational until 1983. Revocation of NPDES permit effective May 1,

IRP No Further Action Sites Summary

Site ID	Site Name	NFA Date	Documentation
			2000.
RVAAP- 31	ORE PILE RETENTION POND	200001	Revocation of NPDES permit effective May 1, 2000.
RVAAP- 35	1037 BUILDING- LAUNDRY WASTEWATER SUMP	200001	Not eligible for ER,A funding.
RVAAP- 36	PISTOL RANGE	200509	Letter from Ohio EPA regarding the delay of clean- up until range no longer used, dated February 14, 2006. Range being used by OHARNG.
RVAAP- 37	PESTICIDE BUILDING S- 4452	199602	Closure letter from Ohio EPA dated September 19, 2000.
RVAAP- 47	BUILDING T- 5301	200109	Statement of Basis - signed by RVAAP and Ohio EPA on December 07, 2000. Clean up to background/bedrock. IRA in FY00 left no contaminants in place.

IRP Schedule

Date of IRP Inception: 198802

Past Phase Completion Milestones

1988

ISC (RVAAP- 23 - UNIT TRAINING EQUIPMENT SITE UST)

PA (RVAAP- 01 - RAMSDELL QUARRY LANDFILL, RVAAP- 02 - ERIE BURNING GROUNDS, RVAAP- 03 - OPEN DEMOLITION AREA #1, RVAAP- 04 - OPEN DEMOLITION AREA #2, RVAAP- 05 - WINKLEPECK BURNING GROUNDS, RVAAP- 06 - C BLOCK QUARRY , RVAAP- 08 - LOAD LINE 1 , RVAAP- 09 - LOAD LINE 2, RVAAP- 10 - LOAD LINE 3, RVAAP- 11 - LOAD LINE 4, RVAAP- 12 - LOAD LINE 12, RVAAP- 13 - BLDG 1200- DILUTION\SETTLING POND, RVAAP- 15 - LOAD LINE 6 TREATMENT PLANT, RVAAP- 16 - FUZE & BOOSTER QUARRY LANDFILL/PONDS, RVAAP- 18 - LOAD LINE 12 WWT PLANT, RVAAP- 19 - LANDFILL NORTH OF WINKLEPECK BURN GRND, RVAAP- 20 - SAND CREEK STP, RVAAP- 21 - DEPOT STP, RVAAP- 22 - GEORGE RD STP, RVAAP- 24 - WASTE OIL TANK, RVAAP- 25 - BLD 1034 MOTOR POOL AST, RVAAP- 26 - FUZE BOOSTER AREA SETTLING TANKS, RVAAP- 28 - MUSTARD AGENT BURIAL SITE, RVAAP- 29 - UPPER AND LOWER COBB PONDS, RVAAP- 30 - LL 7 TREATMENT PLANT, RVAAP- 31 - ORE PILE RETENTION POND)

RFA (RVAAP- 07 - BLD 1601 HAZ WST STG, RVAAP- 14 - LOAD LINE 6 EVAPORATION UNIT, RVAAP- 17 - DEACTIVATION FURNACE, RVAAP- 27 - BUILDING 854, PCB STORAGE)

1989

SI (RVAAP- 01 - RAMSDELL QUARRY LANDFILL, RVAAP- 02 - ERIE BURNING GROUNDS, RVAAP- 03 - OPEN DEMOLITION AREA #1, RVAAP- 04 - OPEN DEMOLITION AREA #2, RVAAP- 05 - WINKLEPECK BURNING GROUNDS, RVAAP- 06 - C BLOCK QUARRY , RVAAP- 08 - LOAD LINE 1 , RVAAP- 09 - LOAD LINE 2, RVAAP- 10 - LOAD LINE 3, RVAAP- 11 - LOAD LINE 4, RVAAP- 12 - LOAD LINE 12, RVAAP- 13 - BLDG 1200- DILUTION\SETTLING POND, RVAAP- 15 - LOAD LINE 6 TREATMENT PLANT, RVAAP- 16 - FUZE & BOOSTER QUARRY LANDFILL/PONDS, RVAAP- 18 - LOAD LINE 12 WWT PLANT, RVAAP- 19 - LANDFILL NORTH OF WINKLEPECK BURN GRND, RVAAP- 20 - SAND CREEK STP, RVAAP- 21 - DEPOT STP, RVAAP- 22 - GEORGE RD STP, RVAAP- 24 - WASTE OIL TANK, RVAAP- 25 - BLD 1034 MOTOR POOL AST, RVAAP- 26 - FUZE BOOSTER AREA SETTLING TANKS, RVAAP- 28 - MUSTARD AGENT BURIAL SITE, RVAAP- 29 - UPPER AND LOWER COBB PONDS, RVAAP- 30 - LL 7 TREATMENT PLANT, RVAAP- 31 - ORE PILE RETENTION POND)

INV (RVAAP- 23 - UNIT TRAINING EQUIPMENT SITE UST)

CS (RVAAP- 07 - BLD 1601 HAZ WST STG, RVAAP- 14 - LOAD LINE 6 EVAPORATION UNIT, RVAAP- 17 - DEACTIVATION FURNACE, RVAAP- 27 - BUILDING 854, PCB STORAGE)

1990

IMP(C) (RVAAP- 23 - UNIT TRAINING EQUIPMENT SITE UST)

1996

SI (RVAAP- 37 - PESTICIDE BUILDING S- 4452)

PA (RVAAP- 32 - 40 MM FIRING RANGE, RVAAP- 33 - LOAD LINE 6 , RVAAP- 34 - SAND CREEK DISPOSAL ROAD LANDFILL, RVAAP- 35 - 1037 BUILDING- LAUNDRY WASTEWATER SUMP, RVAAP- 36 - PISTOL RANGE, RVAAP- 37 - PESTICIDE BUILDING S- 4452, RVAAP- 38 - NACA TEST AREA)

1997

RIFS (RVAAP- 18 - LOAD LINE 12 WWT PLANT)

SI (RVAAP- 32 - 40 MM FIRING RANGE)

1998

SI (RVAAP- 51 - DUMP ALONG PARIS- WINDHAM ROAD, RVAAP- 35 - 1037 BUILDING- LAUNDRY WASTEWATER SUMP, RVAAP- 39 - LOAD LINE 5 , RVAAP- 40 - LOAD LINE 7 , RVAAP- 41 - LOAD LINE 8 , RVAAP- 42 - LOAD LINE 9, RVAAP- 43 - LOAD LINE 10, RVAAP- 44 - LOAD LINE 11, RVAAP- 45 - WET STORAGE AREA, RVAAP- 46 - BUILDING F- 15 AND F- 16, RVAAP- 47 - BUILDING T- 5301, RVAAP- 48 - ANCHOR TEST AREA, RVAAP- 49 - CENTRAL BURN PITS, RVAAP- 50 - ATLAS SCRAP YARD)

Past Phase Completion Milestones

1998

PA (RVAAP- 39 - LOAD LINE 5 , RVAAP- 40 - LOAD LINE 7 , RVAAP- 41 - LOAD LINE 8 , RVAAP- 42 - LOAD LINE 9, RVAAP- 43 - LOAD LINE 10, RVAAP- 44 - LOAD LINE 11, RVAAP- 45 - WET STORAGE AREA, RVAAP- 46 - BUILDING F- 15 AND F- 16, RVAAP- 47 - BUILDING T- 5301, RVAAP- 48 - ANCHOR TEST AREA, RVAAP- 49 - CENTRAL BURN PITS, RVAAP- 50 - ATLAS SCRAP YARD, RVAAP- 51 - DUMP ALONG PARIS- WINDHAM ROAD)

1999

SI (RVAAP- 33 - LOAD LINE 6 , RVAAP- 34 - SAND CREEK DISPOSAL ROAD LANDFILL, RVAAP- 36 - PISTOL RANGE, RVAAP- 38 - NACA TEST AREA)

2000

RD (RVAAP- 47 - BUILDING T- 5301)

2001

RA(C) (RVAAP- 47 - BUILDING T- 5301)

2002

RI/FS (RVAAP- 51 - DUMP ALONG PARIS- WINDHAM ROAD, RVAAP- 34 - SAND CREEK DISPOSAL ROAD LANDFILL)

2003

PA (PBC at Ravenna - PBC (2003 and 2005))

RI/FS (RVAAP- 03 - OPEN DEMOLITION AREA #1)

IRA (RVAAP- 03 - OPEN DEMOLITION AREA #1)

RD (RVAAP- 51 - DUMP ALONG PARIS- WINDHAM ROAD)

2004

RA(C) (RVAAP- 51 - DUMP ALONG PARIS- WINDHAM ROAD, RVAAP- 34 - SAND CREEK DISPOSAL ROAD LANDFILL)

2005

RI/FS (RVAAP- 36 - PISTOL RANGE)

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

To Be Determined

Final RA(C) Completion Date: 201409

NPL Deletion Date: N/A

Schedule for Next Five- Year Review: N/A

Estimated Completion Date of IRP at Installation (including LTM phase): 204810

RAVENNA ARMY AMMUNITION PLANT IRP Schedule

█ = phase underway

SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
PBC at Ravenna	PBC (2003 and 2005)	PA						
		RA(C)	█					
		LTM		█	█	█	█	█
RVAAP- 01	RAMSDELL QUARRY LANDFILL	PA						
		SI						
		RI/FS	█					
		RD	█					
		RA(C)	█	█				
		LTM			█	█	█	█
RVAAP- 02	ERIE BURNING GROUNDS	PA						
		SI						
		RI/FS	█					
		LTM		█	█	█	█	█
RVAAP- 04	OPEN DEMOLITION AREA #2	PA						
		SI						
		RI/FS	█					
		LTM	█	█	█	█	█	█
RVAAP- 05	WINKLEPECK BURNING GROUNDS	PA						
		SI						
		RI/FS						
		RD	█					
		RA(C)	█					
		LTM		█	█	█	█	█
RVAAP- 06	C BLOCK QUARRY	PA						
		SI						
		RI/FS	█	█	█	█		
		RD				█	█	
		RA(C)					█	█
		LTM						█
RVAAP- 08	LOAD LINE 1	PA						
		SI						
		RI/FS	█	█	█	█	█	
		RD	█	█	█	█	█	█
		IRA	█					
		RA(C)	█	█	█	█	█	█
		LTM						█

RAVENNA ARMY AMMUNITION PLANT IRP Schedule

SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 09	LOAD LINE 2	PA						
		SI						
		RI/FS						
		RD						
		IRA						
		RA(C)						
		LTM						
RVAAP- 10	LOAD LINE 3	PA						
		SI						
		RI/FS						
		RD						
		IRA						
		RA(C)						
		LTM						
RVAAP- 11	LOAD LINE 4	PA						
		SI						
		RI/FS						
		RD						
		IRA						
		RA(C)						
		LTM						
RVAAP- 12	LOAD LINE 12	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
RVAAP- 13	BLDG 1200- DILUTION\SETTLING POND	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						

RAVENNA ARMY AMMUNITION PLANT IRP Schedule

SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 16	FUZE & BOOSTER QUARRY LANDFILL/PONDS	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 19	LANDFILL NORTH OF WINKLEPECK BURN GRND	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 28	MUSTARD AGENT BURIAL SITE	PA						
		SI						
		RI/FS						
		LTM						
SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 29	UPPER AND LOWER COBB PONDS	PA						
		SI						
		RI/FS						
		LTM						
SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 32	40 MM FIRING RANGE	PA						
		SI						
		RI/FS						
SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 33	LOAD LINE 6	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 34	SAND CREEK DISPOSAL ROAD LANDFILL	PA						
		SI						
		RI/FS						
		RA(C)						
		LTM						

RAVENNA ARMY AMMUNITION PLANT IRP Schedule

SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 38	NACA TEST AREA	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
RVAAP- 39	LOAD LINE 5	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
RVAAP- 40	LOAD LINE 7	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
RVAAP- 41	LOAD LINE 8	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
RVAAP- 42	LOAD LINE 9	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
RVAAP- 43	LOAD LINE 10	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						

RAVENNA ARMY AMMUNITION PLANT IRP Schedule

SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 44	LOAD LINE 11	PA						
		SI						
		RI/FS						
		LTM						
SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 45	WET STORAGE AREA	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 46	BUILDING F- 15 AND F- 16	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 48	ANCHOR TEST AREA	PA						
		SI						
		RI/FS						
		LTM						
SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 49	CENTRAL BURN PITS	PA						
		SI						
		RI/FS						
		IRA						
		LTM						
SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 50	ATLAS SCRAP YARD	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						

RAVENNA ARMY AMMUNITION PLANT IRP Schedule

SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 51	DUMP ALONG PARIS- WINDHAM ROAD	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						

IRP Costs

Total Funding through FY 2004: \$36,439.0 K

Prior Funding

FY	Phase	Site ID	Obligations	FY Total
2005	LTM	RVAAP- 34	\$937.0 K	\$3,937.0 K
	RAC	PBC at Ravenna	\$2,612.0 K	
	RI	RVAAP- 01	\$20.0 K	
		RVAAP- 02	\$17.0 K	
		RVAAP- 06	\$5.0 K	
		RVAAP- 12	\$5.0 K	
		RVAAP- 13	\$5.0 K	
		RVAAP- 16	\$17.0 K	
		RVAAP- 19	\$5.0 K	
		RVAAP- 28	\$87.0 K	
		RVAAP- 36	\$5.0 K	
		RVAAP- 38	\$5.0 K	
		RVAAP- 39	\$5.0 K	
		RVAAP- 40	\$5.0 K	
		RVAAP- 41	\$16.0 K	
		RVAAP- 42	\$23.0 K	
		RVAAP- 43	\$20.0 K	
		RVAAP- 44	\$34.0 K	
		RVAAP- 45	\$20.0 K	
		RVAAP- 46	\$20.0 K	
	RVAAP- 48	\$20.0 K		
	RVAAP- 49	\$34.0 K		
	RVAAP- 50	\$20.0 K		
2006	LTM	RVAAP- 34	\$2,992.0 K	\$4,366.0 K
	RA(C)	RVAAP- 05	\$1,157.0 K	
	RAC	PBC at Ravenna	\$176.0 K	
	RD	RVAAP- 05	\$22.0 K	
	RI	RVAAP- 05	\$19.0 K	

TOTAL PRIOR FUNDING: \$44,742.0 K

Current Requirements

FY	Phase	Site ID	Requirements	FY Total
2007	LTM	RVAAP- 34	\$1,934.0 K	\$2,272.0 K
	RA(C)	PBC at Ravenna	\$157.0 K	
		RVAAP- 05	\$178.0 K	
	RD	RVAAP- 05	\$3.0 K	

TOTAL CURRENT REQUIREMENTS \$2,272.0 K

TOTAL FUTURE REQUIREMENTS: \$72,468.0 K

TOTAL PROGRAM COST: \$119,482.0 K

RAVENNA ARMY AMMUNITION PLANT

Non- BRAC Excess
Military Munitions Response Program

MMRP Summary

Installation Total Army Environmental Database- Restoration (AEDB- R) Sites/Response Complete (RC) Sites: 19/1

Installation Site Types with Future and/or Underway Phases

- 2 Disposal Pit/Dry Well
(RVAAP- 019- R- 01, RVAAP- 032- R- 01)
- 1 Explosive Ordnance Disposal Area
(RVAAP- 034- R- 01)
- 4 Open Burn
(RVAAP- 001- R- 01, RVAAP- 002- R- 01, RVAAP- 004- R- 01, RVAAP- 016- R- 01)
- 11 Unexploded Munitions/Ordnance
(RVAAP- 008- R- 01, RVAAP- 012- R- 01, RVAAP- 033- R- 01, RVAAP- 046- R- 01, RVAAP- 048- R- 01, RVAAP- 050- R- 01, RVAAP- 060- R- 01, RVAAP- 061- R- 01, RVAAP- 062- R- 01, RVAAP- 063- R- 01, RVAAP- 064- R- 01)

Most Widespread Contaminants of Concern

Munitions and explosives of concern, Munitions constituents

Media of Concern

Groundwater, Sediment, Soil, Surface Water

Completed Remedial Actions (Interim Remedial Actions / Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY	Cost
N/A					

Total Environmental Restoration, Army (ER,A) Funding

Prior Funding: \$0.0 K
 Current Requirements: \$470.5 K
 Future Requirements: \$60,713.0 K
 All amounts are K\$.

Duration of MMRP

Year of MMRP Inception: 200209
 Estimated Date for Remedy- In- Place (RIP)/Response Complete (RC): 201210/201309
 Date of MMRP completion including Long Term Management (LTM): Indefinite

MMRP Contamination Assessment

Contamination Assessment Overview

Twelve load lines at RVAAP were used to load assemble, and pack (LAP) high explosive munitions and components during World War II, and the Korean and Vietnam Wars. Munitions were also periodically demilitarized and renovated during non-production periods up until 1988. More than 36 million large-caliber projectiles, 600 thousand general-purpose bombs, and 420 million munitions components such as fuzes, boosters, and percussion elements were produced during World War II. During the Korean War, more than 11 million projectiles, 4 million propelling charges and cartridges, 220 million munitions components, and a million antitank mines were produced. Although production declined during the Vietnam War compared to the previous two production periods, RVAAP produced in excess of two and a half million large caliber projectiles, 16 million 40-millimeter grenades, seven million fuzes and 80 million primers. Most of the demilitarization of munitions took place after World War II and the Korean War. Off spec or excess RVAAP munitions as well as munitions from other sources were either disassembled with the explosives being recovered or they were burned or detonated at various locations on the facility. Some high explosive munitions made at other US facilities and even from Europe were sent to RVAAP to be demilitarized.

With the exception of ammonium nitrate, all hardware components and explosives used in the LAP operations at RVAAP were manufactured at other facilities. Load Line 12 was used from 1941 to 1943 to make high-grade ammonium nitrate used for mixing with TNT to make amatol. Fertilizer grade ammonium nitrate was produced in the late 1940s for export to Europe. In addition to amatol and pure TNT, Composition B, a mixture of RDX and TNT, was the only other secondary explosive used in large quantities at RVAAP. The primary explosives, lead azide and lead styphnate, were used extensively in the fuze and booster lines. Tetryl and black powder were also used in the components made at these lines. The principle propellants used at RVAAP were nitrocellulose, nitroglycerine, and nitroguanidine in various mixtures. Projectiles from 37 to 240 millimeter were produced at RVAAP with 90, 120, and 155 millimeter being the most common caliber. The general-purpose bombs produced at the facility ranged from 100 to 2,000 pounds gross weight. More information on the chemicals and types of munitions used or produced at RVAAP can be found in the June 2004 ASR for RVAAP.

An inventory of the closed, transferring, and transferred (CTT) ranges or sites at RVAAP was completed in November 2003 under the Army's Military Munitions Response Program (MMRP) in order to meet the requirement of the OSD DERP Management Guidance and the follow-on requirements of the FY02 Defense Authorization Act. The inventory identified 19 MMRP sites at RVAAP totaling 1,460.39 acres that are known or suspected to contain munitions and explosives of concern (MEC). These sites include former open burning and demolition grounds, disposal sites, test ranges, and load lines. Not being maintained for more than 30 years, many of these sites are now overgrown with brush, saplings, and even large trees, and some, such as Erie Burning Grounds, are permanently flooded. A portion of the D Block safety fan originating from the accidental explosion of Igloo 7-D-15 is the only privately-owned area (it was always privately owned). The explosive safety risk of each of the sites was evaluated using the Risk Assessment Code (RAC) process (RAC is now referred to as Munitions Response Site Prioritization Protocol (MRSP)). Site specific information and more on the RAC scores can be found in the CTT Inventory.

Most of the known MEC at RVAAP are at Open Demolition Area (ODA) 2 and Winklepeck Burning Ground (WBG). MEC and MEC scrap are on the surface and buried throughout WBG and ODA #2, and to a lesser degree, on the surface beyond the site as a result of kick-outs. Munitions detonated at ODA 2 and burned at WBG were usually unfuzed with the exception of 40-millimeter grenades, which have an integral fuze. White phosphorus is present at ODA 2. Other sites, such as Fuze and Booster Quarry Ponds, Ramsdell Quarry Landfill, and Erie Burning Grounds were used for disposal of MEC while others, such as Load Line 12 and Buildings F-15 and F-16 contain MEC incidental to production or testing. Only small amounts of MC have been found at a couple sites.

WBG site was determined to be ineligible for MMRP due to it being an operational range.

The 1.5 acre RCRA unit in ODA #2 was cleared of MEC to a depth of four feet from 1999 to 2000. This area was determined to be ineligible for MMRP.

The MMRP at RVAAP is based upon the phased approach similar to the restoration (CERCLA) program. Starting in 2005, a Site Inspection (SI) was initiated for all sites except for WBG. The SI will further identify the boundaries and types of munitions at the sites using limited geophysical and intrusive studies. The SI will then be used to determine whether additional study and/or remedial action will be necessary. Long-term Management of the sites will be required to ensure the selected remedy continues to be effective and any land use controls are being followed. The SI is expected to be completed by December 2007, but remediation of MEC will not be completed until 2012. Ohio EPA will be the lead regulatory agency and all stakeholders including the RAB members and the public, will be encouraged to provide their input into the MMRP.

MMRP Contamination Assessment

Cleanup Exit Strategy

The installation plans to complete all SIs by December 2007 and execute follow- on phases/actions as required in the individual site cleanup strategies.

MMRP Previous Studies

	Title	Author	Date
2003	Final US Army Closed, Transferring and Transferred Range/Site Inventory for Ravenna Army Ammunition Plant, Ohio	engineering- environmental Management, Inc.	NOV- 2003
2004	Archives Search Report for the Ravenna Army Ammunition Plant	US Army Corps of Engineers	JUN- 2004
2007	Military Munitions Response Program Historical Records Review, Ravenna Army Ammunition Plant, Ohio	e2M	JAN- 2007

RAVENNA ARMY AMMUNITION PLANT

Non- BRAC Excess

Military Munitions Response Program

Site Descriptions

Site ID: RVAAP- 001- R- 01
Site Name: RAMSDELL QUARRY LANDFILL

STATUS

Parcel: Ramsdell Landfill

Regulatory Driver: CERCLA

MRSPP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern,
Munitions constituents

Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409
RIP Date:	N/A	
RC Date:	201209	

SITE DESCRIPTION

Quarry Landfill (MMRP area) is an unlined approximately 3.79 acre landfill in the bottom of an abandoned quarry to the north of Load Line 1. The site is associated with the AEDB- R site RVAAP- 01. During the period 1946 to 1950, the site was used to thermally treat waste explosives and napalm bombs. No historic information has been located for the period of 1950- 1976. From 1976, the site was used as a non- hazardous solid waste landfill. The site was permitted as a sanitary landfill in 1978 by the State of Ohio until its closure in 1990.

The landfill cover is regulated under RCRA while the remaining portion of the site is regulated under CERCLA. Outside of the landfill cover, MEC exists on slopes and the wetlands. MEC also exists on the south side of the railroad tracks. Groundwater monitoring is being conducted under the facility- wide groundwater monitoring program and is addressed under RVAAP- 01. IRP constituents of concern include explosives and metals. The area is currently undeveloped. The MMRP Site Inspection is underway.

CLEANUP/EXIT STRATEGY

The MMRP SI will be completed in FY08. Further investigation and limited cleanup may be conducted.

Land use controls will be addressed under the IRP.

Site ID: RVAAP- 002- R- 01
Site Name: ERIE BURNING GROUNDS

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

MRSPP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern,
Munitions constituents

Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409

RIP Date: N/A

RC Date: 201209

SITE DESCRIPTION

The Erie Burning Grounds was in operation from 1941 to 1951 and covers approximately 33.93 acres. The burning grounds are situated on the northeastern corner of the facility next to the Portage/Trumbull County line and are composed primarily of wetlands. The site is associated with the AEDB- R site RVAAP- 02. The site was used to thermally treat bulk, obsolete, or off- specification propellants, conventional explosives, rags, and large explosive contaminated items (e.g., railcars) by open burning on the ground surface. The ash residue from the burns was left on the site. An IRP RI was completed and an FS is underway. IRP constituents of concern include explosives, metals, and SVOCs. MMRP COCs are MEC only. Photos in the June 2004 ASR confirm the presence of MEC. The site is currently a primarily undeveloped wetland.

CLEANUP/EXIT STRATEGY

The MMRP SI will be completed in FY08. Further investigation and limited cleanup may be conducted. We anticipate that LUCs and LTM will be required.

Currently this area is used for permitted wetlands access for waterfowl hunting and trapping.

Future end uses include using water for fire suppression, dust control, and trapping.

Site ID: RVAAP- 004- R- 01
 Site Name: OPEN DEMOLITION AREA #2

STATUS

Parcel: Open Demolition Area #2

Regulatory Driver: CERCLA

MRSPP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern,
 Munitions constituents

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
IRA.....	200710.....	200809
RA(C).....	201110.....	201209
RA(O).....	201210.....	201309
LTM.....	201410.....	204409

RIP Date: 201210

RC Date: 201309

SITE DESCRIPTION

Open Demolition Area #2 was used from 1948 to 1991 to detonate large caliber munitions and off- spec bulk explosives. The site was also used to dispose of white phosphorus and bombs. The site is associated with the AEDB- R site RVAAP- 04. The demolition area is situated in the central portion of the facility north of Newton Falls Road, north of the fuze and booster lines. The area consists of approximately 14.91 acres within which there is a 1.5- acre RCRA unit for demolition of munitions. Detonations were performed in pits. After detonation, metal parts were removed from the site. This site is in the MMRP. An IRP RI was completed; only short- term LUCs will be implemented under the IRP. IRP constituents of concern include explosives and metals. A 1.5- acre area north of Sand Creek was cleared of MEC, including fuzes, fuze components, burster tubes and projectiles, to a depth of four feet from 2000- 2001. The site is currently undeveloped. The June 2004 ASR confirmed MEC presence.

CLEANUP/EXIT STRATEGY

The MMRP SI will be completed in FY08. Further investigation and limited cleanup may be conducted.

Interim and final land use controls will be conducted at this site.

MEC is on the surface and sub- surface and in Sand Creek. An EE/CA and ROD for an IRA of MEC in Sand Creek and stabilization of Rocket Ridge bank is planned for FY08.

STATUS

Parcel: NONE
 Regulatory Driver: CERCLA
 MRSPP Score: Evaluation pending
 Contaminants of Concern: Munitions and explosives of concern
 Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409
RIP Date:	N/A	
RC Date:	201209	

SITE DESCRIPTION

Line 1 operated from approximately 1941 to 1992 for loading various types of projectiles. Ordnance was demilitarized at this site from 1973 to 1974. Load Line 1 is associated with the AEDB- R site RVAAP- 08. The area used for the demilitarizing operations is approximately 163.62 acres and includes the areas surrounding Bldg CB13B and the demolished Bldg CB14. Propellant pellets were found on this site and a 152mm inert projectile was found in a building and removed. This MMRP site was discovered during the initial IRP investigation of the Load Line. An IRP RI was conducted. Constituents of concern identified during the IRP RI include explosives (excluding the propellant pellets), metals, and SVOCs. The June 2004 ASR confirmed MEC presence.

CLEANUP/EXIT STRATEGY

Propellant pellet removal will be conducted only in areas of IRP cleanup (less than one acre). Propellant is present in other areas.

STATUS

Parcel: Load Line 12

Regulatory Driver: CERCLA

MRSP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern

Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409

RIP Date: N/A

RC Date: 201209

SITE DESCRIPTION

Load Line 12 operated from 1941 to 1993. From 1941 to 1943 and again in 1946, ammonium nitrate was produced. From 1949 to 1993, artillery projectiles were demilitarized. During IRP work in the fall of 1999, demilitarized 90mm artillery projectiles were found just below the ground surface just north of the access road in the northwest corner of the Load Line #12 area. The demilitarized 90mm projectiles are now stored in ODA #2, Bldg 1501. The site is associated with the AEDB- R site RVAAP- 12. The site is 77.58 acre in size and is undeveloped currently. The June 2004 ASR indicates potential MEC presence.

CLEANUP/EXIT STRATEGY

The MMRP SI will be completed in FY08. This site will likely go to NFA after the SI.

MC is being addressed under IRP.

Site ID: RVAAP- 016- R- 01
Site Name: FUZE AND BOOSTER QUARRY

STATUS

Parcel: 40 mm Test Range/Waterworks Ponds

Regulatory Driver: CERCLA

MRSPP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern,
Munitions constituents

Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
RA(O).....	201210.....	201309
LTM.....	201410.....	204409
RIP Date:	201210	
RC Date:	201309	

SITE DESCRIPTION

The Fuze and Booster Quarry operated from 1945 to 1993. The site consists of three ponds situated end to end and separated by earthen berms in an abandoned rock quarry. The site is associated with the AEDB- R site RVAAP- 16.

Prior to 1976, the quarry was used for open burning. Any type of munitions produced at the plant may have been destroyed here. IRP constituents of concern include explosives and metals in groundwater, soil, surface water and sediment. The Fuze and Booster Quarry is approximately 12.74 acres and located in the south central portion of RVAAP. MEC has been confirmed at North and South Ponds. The June 2004 ASR indicates potential MEC presence.

CLEANUP/EXIT STRATEGY

MC is included under IRP.

The MMRP SI will be completed in FY08. Further investigation will be conducted and limited cleanup may be conducted. LTM will include LUCs, 5- year reviews and MEC monitoring.

Future site use consists of mounted training with no digging.

Currently portions of the area are used for permitted wetlands access for waterfowl hunting and trapping. Future end uses include using water for fire suppression, dust control, trapping and fishing.

Site ID: RVAAP- 019- R- 01
 Site Name: LANDFILL NORTH OF WINKLEPECK

STATUS

Parcel: Clean Hard Landfill

Regulatory Driver: CERCLA

MRSP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern,
 Munitions constituents

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409

RIP Date: N/A

RC Date: 201209

SITE DESCRIPTION

This site was used from 1969 to 1976. This area is an approximately 7.55- acre, unlined landfill formerly used for disposal of general plant refuse, including explosive wastes residue. In addition, open burn waste from the Winklepeck Burning Grounds was disposed here, including flares and booster cups. The appearance of the land surface suggests trench and fill type disposals. The MMRP site extends from toe of the slope to and including the creek. The landfill is being addressed under the IRP site RVAAP- 19. The constituents of concern include MEC and MC.

CLEANUP/EXIT STRATEGY

The MMRP SI will be completed in FY08. Further investigation will be conducted and limited cleanup may be conducted. LTM will include LUCs, 5- year reviews and MEC monitoring.

Future site use consists of dismantled training with no digging.

Site ID: RVAAP- 032- R- 01
Site Name: 40 MM FIRING RANGE

STATUS

Parcel: 40 mm Test Range/Waterworks Ponds
Regulatory Driver: CERCLA
MRSP Score: Evaluation pending
Contaminants of Concern: Munitions and explosives of concern
Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409
RIP Date:	N/A	
RC Date:	201209	

SITE DESCRIPTION

This range is located north of Load Line 8. The range is approximately 5.17 acres. This range was reported by former workers at RVAAP to have been used for test firing 40mm grenades. The dates of operation for this area were from 1969 to 1971.

This range is associated with the AEDB- R site RVAAP- 32. The IR site is addressing all MCs. According to the June 2004 ASR, the area is considered to potentially have MEC presence; however, it was verbally reported the range was cleared as test firing occurred; however, no report has been found.

CLEANUP/EXIT STRATEGY

MC is included under IRP.

The MMRP SI will be completed in FY08. Further investigation will be conducted; however no removal actions are anticipated. Future OHARNG use consists of mounted training with no digging.

Site ID: RVAAP- 033- R- 01
 Site Name: FIRESTONE TEST FACILITY

STATUS

Parcel: Load Line 6

Regulatory Driver: CERCLA

MRSP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern,
 Munitions constituents

Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409

RIP Date: N/A

RC Date: 201209

SITE DESCRIPTION

The Firestone Test Facility (also known as the Shaped Charge Test Facility) is located within the Load Line 6 Fuze & Booster Area. The Load Line 6 Fuze & Booster area is associated with the AEDB- R site RVAAP- 33. The Firestone Test Facility includes a pond area where the shaped charges were tested underwater. The site occupies approximately 0.25 acre and according to personnel interviews it was used to test tube- launched, optically- tracked, wire- guided (TOW) and Dragon missiles from 1970 to 1992. The facility has five separate areas within Load Line 6 that may have been used for shaped charge testing.

CLEANUP/EXIT STRATEGY

MC is included under IRP.

The MMRP SI will be completed in FY08. Further investigation will be conducted. A removal action with LTM is anticipated.

Future site use consists of mounted training with no digging.

Site ID: RVAAP- 034- R- 01
Site Name: SAND CREEK DUMP

STATUS

Parcel: NONE
Regulatory Driver: CERCLA
MRSP Score: Evaluation pending
Contaminants of Concern: Munitions and explosives of concern
Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409
RIP Date:	N/A	
RC Date:	201209	

SITE DESCRIPTION

The site is 0.85 acre and is located adjacent to Sand Creek. The Sand Creek Dump was used as a construction landfill for concrete, wood, asbestos debris, lab bottles, 55- gallon drums and fluorescent light tubes from 1950 to 1960. The site is associated with the AEDB- R site RVAAP- 34. During an IRA performed in October 2003, two 75- mm inert projectiles were discovered at this site.

CLEANUP/EXIT STRATEGY

MC is included under IRP.

The MMRP SI will be completed in FY08. No further investigation is anticipated. Any required LTM will be conducted under RVAAP- 34.

Future site use consists of dismantled training with no digging.

Site ID: RVAAP- 046- R- 01
Site Name: BUILDING #F- 15 AND F- 16

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

MRSPP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern,
Munitions constituents

Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409

RIP Date: N/A

RC Date: 201209

SITE DESCRIPTION

Building F- 15 and F- 16 were used from approximately 1941 to 1992. Building F- 15 and Building F- 16 have been demolished but not removed. The site consists of 12.23 acres and is located in the northwestern portion of RVAAP. The site is associated with the AEDB- R site RVAAP- 46. Large caliber artillery projectiles, void of HE, have been found outside the building and disposed. An IRP site characterization was conducted in 2004.

CLEANUP/EXIT STRATEGY

MC is included under IRP.

The MMRP SI will be completed in FY08. Any incidental MEC will be removed under IR Site RVAAP- 46.

Future site use consists of dismantled training with digging.

Site ID: RVAAP- 048- R- 01
Site Name: ANCHOR TEST AREA

STATUS

Parcel: Anchor Test Area

Regulatory Driver: CERCLA

MRSP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern,
Munitions constituents

Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409

RIP Date: N/A

RC Date: 201209

SITE DESCRIPTION

The Anchor Test Area was operated from approximately 1941 to 1952. The site is approximately 2.57 acres (range is 0.1 acre) and currently consists of several dirt mounds and a nearby sand pit. The area's function was to test fire anchoring devices into the ground. RVAAP personnel believe that small explosive devices were used to drive anchors for ropes or cables into the ground. The Anchor Test Area is located in the south central portion of RVAAP. Some metal debris has been found in the area. This site is associated with the AEDB- R site RVAAP- 48.

CLEANUP/EXIT STRATEGY

MC is included under IRP.

The MMRP SI will be completed in FY08.

A MEC RI/FS and limited removal action may be needed to clear an area approximately 0.1 acre. LTM consisting of 5- year reviews and LUC are planned.

Future site use consists of mounted training with no digging.

Site ID: RVAAP- 050- R- 01
Site Name: ATLAS SCRAP YARD

STATUS

Parcel: NONE

Regulatory Driver: CERCLA

MRSP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern,
Munitions constituents

Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712

RIP Date: N/A

RC Date: 200712

SITE DESCRIPTION

The Atlas Scrap Yard is the site of the original camp built to house workers during the construction of RVAAP. The area is approximately 66 acres. All of the buildings were demolished following World War II. Since that time the area has been used as a scrap yard for scrap metal and miscellaneous materials. Scrap metal, including metal from demilitarized munitions and munitions components, was kept at this site pending sale. In September of 1993 when the Ravenna Arsenal, Inc. operating contract expired and the RVAAP went into modified caretaker status, whatever scrap was at this site was left in place. During the RI, MEC was uncovered in the southwest corner of the site. Most of the MEC and MEC scrap was removed from the site in 2003. Any of the munitions or munitions constituents made at or used at the plant may have been disposed of here. This site is associated with AEDB- R site RVAAP- 50.

CLEANUP/EXIT STRATEGY

MC is included under IRP.

The MMRP SI will be completed in FY08. NFA is anticipated after the SI.

Future site use consists of mounted training with no digging.

STATUS

Parcel: NONE
 Regulatory Driver: CERCLA
 MRSPP Score: Evaluation pending
 Contaminants of Concern: Munitions and explosives of concern
 Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409
RIP Date:	N/A	
RC Date:	201209	

SITE DESCRIPTION

The D Block of igloos, located in the north- central part of RVAAP, was used to store ordnance and explosives. This block of igloos is now inactive. Bombs were stored in the igloos after they were built in 1941. On 24 March 1943, bombs in igloo number 7- D- 15 exploded. There were multiple fatalities from this accident. Bomb fragments and demolished building material was propelled up to 2.9 miles away from the igloo. A majority of the material landed up to 2 miles to the northeast within the RVAAP boundary. Facility personnel made a map showing the distribution of the debris after the explosion. Cluster bombs may have been propelled from the igloo; however, no MEC was reported to be found from the explosion. Ravenna Ordnance Plant personnel reported that the site was considered clean of MEC some time after the explosion. No documented evidence of MEC removal was identified. The igloo was 0.04 acres in size. The site boundary is a circle approximately 3,000 feet in diameter centered on the igloo (a total of 622.24 acres). A portion of the circle extends beyond the installation boundary and is considered separately as a transferred site. The site is currently undeveloped.

CLEANUP/EXIT STRATEGY

The MMRP SI will be completed in FY08. Further MEC investigation followed by removal and LTM are planned.

Future site use consists of dismantled training with digging.

Site ID: RVAAP- 061- R- 01
Site Name: BLOCK D IGLOO - TD

STATUS

Parcel: NONE
Regulatory Driver: CERCLA
MRSPP Score: Evaluation pending
Contaminants of Concern: Munitions and explosives of concern
Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409

RIP Date: N/A
RC Date: 201209

SITE DESCRIPTION

The D Block of igloos, located in the north- central portion of RVAAP, was used to store ordnance and explosives. This area consists of the portion of the Maximum Fragmentation Distance (MFD) circle that extends beyond the installation boundary, a total of 19.25 acres. Bombs stored in Igloo 7- D- 15 exploded on 24 March 1943. There were multiple on- site fatalities from this accident. Bomb fragments and demolished building material was propelled up to 2.9 miles away from the igloo to the northeast, off RVAAP land. A majority of the material landed up to 2 miles to the northeast within the RVAAP boundary. Cluster bombs may have been propelled from the igloo. No other documented evidence of MEC removal was identified.

CLEANUP/EXIT STRATEGY

The MMRP SI will be completed in FY08. Further MEC investigation followed by removal is anticipated.

Site ID: RVAAP- 062- R- 01
Site Name: WATER WORKS #4 DUMP

STATUS

Parcel: NONE
Regulatory Driver: CERCLA
MRSP Score: Evaluation pending
Contaminants of Concern: Munitions and explosives of concern
Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409
RIP Date:	N/A	
RC Date:	201209	

SITE DESCRIPTION

The site is approximately 6.15 acres and is immediately west of Water Works 4 and Load Line 7, in the southwestern portion of RVAAP. The Water Works 4 Dump is a wooded area that has nonexplosive metal parts from Mark- 1 shrapnel rounds scattered on the ground surface and partially buried. No other components of the projectiles were found.

CLEANUP/EXIT STRATEGY

The MMRP SI will be completed in FY08. Further investigation is anticipated.

Future land use includes mounted training with no digging.

STATUS

Parcel: NONE
 Regulatory Driver: CERCLA
 MRSPP Score: Evaluation pending
 Contaminants of Concern: Munitions and explosives of concern
 Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409
RIP Date:	N/A	
RC Date:	201209	

SITE DESCRIPTION

The site is approximately 2.65 acres between buildings 846 and 849 where construction debris and rubbish were burned. The area is in the immediate vicinity of buildings used actively for storage of OHARNG vehicles and equipment. The site is located along the southern boundary of the central portion of RVAAP. In 1996, one "hammerhead" fragmentation bomb was found by OHARNG personnel on the ground surface at the site and destroyed. In addition, one inert 175 mm projectile was found on the ground surface on the site. The projectile has been removed to proper storage.

CLEANUP/EXIT STRATEGY

The MMRP SI will be completed in FY08.

Future land use includes dismounted training with digging.

STATUS

Parcel: NONE
 Regulatory Driver: CERCLA
 MRSPP Score: Evaluation pending
 Contaminants of Concern: Munitions and explosives of concern
 Media of Concern: Soil

Phases	Start	End
PA.....	200209.....	200312
SI.....	200509.....	200712
RI/FS.....	200810.....	200909
RD.....	201010.....	201109
RA(C).....	201110.....	201209
LTM.....	201410.....	204409

RIP Date: N/A
 RC Date: 201209

SITE DESCRIPTION

The site is a 91.86- acre field at the northeastern corner of the intersection of Paris- Windham Road and Smalley Road. The area was intermittently leased for agricultural purposes between the 1941 and 2000. The field was abandoned as an agricultural field sometime prior to the mid 1970s and was overtaken by the growth of woody vegetation. In 1984 the woody plant growth was cleared with heavy equipment and the field put into hay. The site was leased for the production of hay from 1985 to 2000. One inert anti- tank landmine, which was used for training purposes, was discovered in the northern central portion of the site in the forested area just out of the field in 1996.

CLEANUP/EXIT STRATEGY

The MMRP SI will be completed in FY08.

Future land use includes dismantled training with digging.

MMRP No Further Action Sites Summary

Site ID	Site Name	NFA Date	Documentation
RVAAP- 005- R- 01	WINKLEPECK BURNING GROUNDS	200603	Operational Range. Ineligible for ER,A funding.

MMRP Schedule

Date of MMRP Inception: 200209

Past Phase Completion Milestones

2004

PA (RVAAP- 001- R- 01 - RAMSDELL QUARRY LANDFILL, RVAAP- 002- R- 01 - ERIE BURNING GROUNDS, RVAAP- 004- R- 01 - OPEN DEMOLITION AREA #2, RVAAP- 005- R- 01 - WINKLEPECK BURNING GROUNDS, RVAAP- 008- R- 01 - LOAD LINE #1, RVAAP- 012- R- 01 - LOAD LINE #12, RVAAP- 016- R- 01 - FUZE AND BOOSTER QUARRY, RVAAP- 019- R- 01 - LANDFILL NORTH OF WINKLEPECK, RVAAP- 032- R- 01 - 40 MM FIRING RANGE, RVAAP- 033- R- 01 - FIRESTONE TEST FACILITY, RVAAP- 034- R- 01 - SAND CREEK DUMP, RVAAP- 046- R- 01 - BUILDING #F- 15 AND F- 16, RVAAP- 048- R- 01 - ANCHOR TEST AREA, RVAAP- 050- R- 01 - ATLAS SCRAP YARD, RVAAP- 060- R- 01 - BLOCK D IGLOO, RVAAP- 061- R- 01 - BLOCK D IGLOO - TD, RVAAP- 062- R- 01 - WATER WORKS #4 DUMP, RVAAP- 063- R- 01 - Group 8 MRS, RVAAP- 064- R- 01 - Old Hay Field MRS)

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

To Be Determined

Final RA(C) Completion Date: 201209

NPL Deletion Date: N/A

Schedule for Next Five- Year Review: N/A

Estimated Completion Date of MMRP at Installation (including LTM phase): Indefinite

RAVENNA ARMY AMMUNITION PLANT MMRP Schedule

 = phase underway

SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 001- R- 0	RAMSDELL QUARRY LANDFILL	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
RVAAP- 002- R- 0	ERIE BURNING GROUNDS	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
RVAAP- 004- R- 0	OPEN DEMOLITION AREA #2	PA						
		SI						
		RI/FS						
		RD						
		IRA						
		RA(C)						
		RA(O)						
		LTM						
RVAAP- 008- R- 0	LOAD LINE #1	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
RVAAP- 012- R- 0	LOAD LINE #12	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						

RAVENNA ARMY AMMUNITION PLANT MMRP Schedule

SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP-016- R-0	FUZE AND BOOSTER QUARRY	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
RVAAP-019- R-0	LANDFILL NORTH OF WINKLEPECK	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
RVAAP-032- R-0	40 MM FIRING RANGE	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
RVAAP-033- R-0	FIRESTONE TEST FACILITY	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
RVAAP-034- R-0	SAND CREEK DUMP	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
RVAAP-046- R-0	BUILDING #F- 15 AND F- 16	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						

RAVENNA ARMY AMMUNITION PLANT MMRP Schedule

SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP-048-R-0	ANCHOR TEST AREA	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
RVAAP-050-R-0	ATLAS SCRAP YARD	PA						
		SI						
RVAAP-060-R-0	BLOCK D IGLOO	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
RVAAP-061-R-0	BLOCK D IGLOO - TD	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
RVAAP-062-R-0	WATER WORKS #4 DUMP	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						
RVAAP-063-R-0	Group 8 MRS	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						

RAVENNA ARMY AMMUNITION PLANT MMRP Schedule

SITE ID	SITE NAME	PHASE	FY08	FY09	FY10	FY11	FY12	FY13+
RVAAP- 064- R- 0	Old Hay Field MRS	PA						
		SI						
		RI/FS						
		RD						
		RA(C)						
		LTM						

MMRP Costs

Total Funding through FY 2004: \$.0 K

Prior Funding

FY	Phase	Site ID	Obligations	FY Total
2005	SI	All Sites	\$290.0 K	\$290.0 K
2006	SI	RVAAP- 001- R- 01	\$1.0 K	\$11.0 K
		RVAAP- 002- R- 01	\$1.0 K	
		RVAAP- 003- R- 01	\$1.0 K	
		RVAAP- 004- R- 01	\$1.0 K	
		RVAAP- 005- R- 01	\$1.0 K	
		RVAAP- 006- R- 01	\$1.0 K	
		RVAAP- 007- R- 01	\$1.0 K	
		RVAAP- 008- R- 01	\$1.0 K	
		RVAAP- 009- R- 01	\$1.0 K	
		RVAAP- 010- R- 01	\$1.0 K	
		RVAAP- 011- R- 01	\$1.0 K	

TOTAL PRIOR FUNDING: \$.0 K

Current Requirements

FY	Phase	Site ID	Requirements	FY Total
2007	SI	RVAAP- 001- R- 01	\$21.1 K	\$470.5 K
		RVAAP- 002- R- 01	\$21.1 K	
		RVAAP- 004- R- 01	\$111.8 K	
		RVAAP- 008- R- 01	\$21.1 K	
		RVAAP- 012- R- 01	\$21.1 K	
		RVAAP- 016- R- 01	\$21.1 K	
		RVAAP- 019- R- 01	\$21.1 K	
		RVAAP- 032- R- 01	\$21.1 K	
		RVAAP- 033- R- 01	\$21.1 K	
		RVAAP- 034- R- 01	\$21.1 K	
		RVAAP- 046- R- 01	\$21.1 K	
		RVAAP- 048- R- 01	\$21.1 K	
		RVAAP- 050- R- 01	\$21.1 K	
		RVAAP- 060- R- 01	\$21.1 K	
		RVAAP- 061- R- 01	\$21.1 K	
		RVAAP- 062- R- 01	\$21.1 K	
		RVAAP- 063- R- 01	\$21.1 K	
		RVAAP- 064- R- 01	\$21.1 K	

TOTAL CURRENT REQUIREMENTS \$470.5 K

TOTAL FUTURE REQUIREMENTS: \$60,713.0 K

TOTAL PROGRAM COST: \$61,183.5 K

Community Involvement

Technical Review Committee (TRC): None

Restoration Advisory Board (RAB): RAB established 1996

RAB Adjournment Date:

RAB Adjournment Reason:

Additional Community Involvement Information

The RVAAP Restoration Advisory Board (RAB) was established in 1996 and has 25 members consisting of 23 community members and 2 non- community members. The community members include an appointee from each of the surrounding 6 townships, one representative appointed by the Trumbull County Commissioners, a representative appointed by the Portage County Commissioners, and 15 members chosen from the general public. One of the community members is elected as a community co- chair by majority vote. The two non- community members include a representative of the Ohio EPA and an Army installation co- chair appointed by the installation. A RAB operating procedure was adopted by all members on February 19, 1997. A copy can be found on the RVAAP web site www.RVAAP.org, as well as in two public repositories (The Reed Memorial Library in Ravenna and the Newton Falls Public Library).

The RVAAP RAB generally meets every two to three months. All meetings are open to the public and are rotated among public places within the townships around the installation. Current topics are addressed at the meetings and a speaker is generally featured. There have been presentations by the Ohio Department of Health addressing health issues related to the cleanup; by the contractors that are performing remediation work; by WES on the explosive uptake by vegetation; Corps of Engineers describing newly identified contaminated sites; and the US Army Center for Health Promotion and Preventive Medicine to explain the rating of sites for funding and the process of performing ecological and human health risk assessments. The minutes of all RAB meetings are recorded. All meetings are announced in the local media. Regular RAB meetings were held during the past year covering such topics Performance- Based Contracts at LLs 1- 4, progress of the remedial investigations at the high RRSE AOCs, and thermal decontamination at excess production buildings. Tours were held in August 2005 and September 2006 for RAB members, the media, and elected officials to view ongoing restoration activities.

All IRP records are made available to the RAB members and any other interested parties through the two public repositories. IRP and other RVAAP documents are available at www.RVAAP.org. The RAB receives technical assistance for public participation (TAPP).

In 2003, a Community Involvement Plan was developed to facilitate communication, identify issues of concern and serve as a guide for public involvement goals and objectives. The plan outlines the many ways that Ravenna AAP involves the community in the restoration activities, including through the RAB, site tours and issuance of fact sheets and newsletters.

Administrative Record is located at

TBD

Information Repository is located at

The Reed Memorial Library in Ravenna and the Newton Falls Public Library

Current Technical Assistance for Public Participation (TAPP): 199906

TAPP Title: Winklepeck OB Grounds Phase II

Current Technical Assistance for Public Participation (TAPP): 200102

TAPP Title: Winklepeck Burning Grounds site

Potential TAPP: N/A

