

Final

**Project Management Plan
for the Performance-Based Acquisition of Six Environmental Areas of Concern at
the Ravenna Army Ammunition Plant**

Revision 1

**Ravenna Army Ammunition Plant
Ravenna, Ohio**

March 1, 2010

**GSA Contract No. GS-10F-0076J
Delivery Order No. W912QR-05-F-0033**

Prepared for:



**US Army Corps
of Engineers®**

**United States Army Corps of Engineers
Louisville District**

Prepared by:




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Science Applications International Corporation (SAIC) has completed the Final Project Management Plan for the Performance-Based Acquisition of Six Environmental Areas of Concern at the Ravenna Army Ammunition Plant, Ravenna Ohio, Revision 1. Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of data quality objectives; technical assumptions; methods, procedures, and materials to be used; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing USACE policy.



Jed Thomas
Study/Design Team Leader

3/1/10
Date



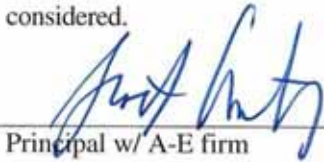
W. Kevin Jago
Independent Technical Review Team Leader

03/01/2010
Date

Significant concerns and the explanation of the resolution are as follows:

Internal SAIC Independent Technical Review comments are recorded on a Document Review Record per SAIC quality assurance procedure QAAP 3.1. This Document Review Record is maintained in the project file. Changes to the report addressing the comments have been verified by the Study/Design Team Leader.

As noted above, all concerns resulting from independent technical review of the project have been considered.



Principal w/ A-E firm

March 1, 2010
Date

Final

Project Management Plan
for the Performance-Based Acquisition of Six Environmental Areas of
Concern at the Ravenna Army Ammunition Plant

Revision 1

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Ravenna, Ohio

GSA Contract No. GS-10F-0076J
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Prepared for:

U.S. Army Corps of Engineers
600 Martin Luther King, Jr. Place
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March 1, 2010

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Revision 1

Ravenna Army Ammunition Plant
Ravenna, Ohio

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NGB = National Guard Bureau

OHARNG = Ohio Army National Guard

Ohio EPA-NEDO = Ohio Environmental Protection Agency – Northeast District Office

REIMS = Ravenna Environmental Information Management System

RVAAP = Ravenna Army Ammunition Plant

SAIC = Science Applications International Corporation

USACE = United States Army Corps of Engineers

USAEC = United States Army Environmental Command

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ACRONYMS AND ABBREVIATIONS

AOC	Area of Concern
ARAR	Applicable and Relevant or Appropriate Requirement
BRACD	Base Realignment and Closure Division
Camp Ravenna	Camp Ravenna Joint Military Training Center
CBP	Central Burn Pits
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIH	Certified Industrial Hygienist
COC	Chemical of Concern
COR	Contracting Officer's Representative
CQA	Certified Quality Auditor
CQAP	Contractor Quality Assurance Plan
CQM	Construction Quality Management
CSP	Certified Safety Professional
DERR	Division of Emergency and Remedial Response
DFFO	Director's Final Findings and Orders
DoD	Department of Defense
EBG	Erie Burning Grounds
EE/CA	Engineering Evaluation/Cost Analysis
EPC	Exposure Point Concentration
FBQ	Fuze and Booster Quarry Landfill/Ponds
FS	Feasibility Study
GSA	United States General Services Administration
HHRA	Human Health Risk Assessment
IDW	Investigation-Derived Waste
IRP	Installation Restoration Program
JMC	United States Army Joint Munitions Command
LL12	Load Line 12
LTM	Long Term Monitoring
LUC	Land Use Control
MEC	Munitions and Explosives of Concern
mph	Miles Per Hour
NCP	National Contingency Plan
NFA	No Further Action
NGB	National Guard Bureau
NEDO	Northeast District Office
Non-TCRA	Non-Time Critical Removal Action
NPDES	National Pollutant Discharge Elimination System
ODA2	Open Demolition Area #2
OE	Ordnance and Explosives
OFFO	Office of Federal Facilities Oversight

ACRONYMS AND ABBREVIATIONS (continued)

OHARNG	Ohio Army National Guard
Ohio EPA	Ohio Environmental Protection Agency
OSHA	Occupational Safety & Health Administration
PBA	Performance-Based Acquisition
PBC	Performance-Based Contract
PCN	Pre-Construction Notification
PE	Professional Engineer
PG	Professional Geologist
PMP	Project Management Plan
PP	Proposed Plan
PPE	Personal Protective Equipment
PWS	Performance Work Statement
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RA	Remedial Action
RAO	Remedial Action Objective
RAB	Restoration Advisory Board
RAR	Remedial Action Report
RC	Remedy Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
REIMS	Ravenna Environmental Information Management System
RI	Remedial Investigation
RIP	Remedy In Place
ROD	Record of Decision
RQL	Ramsdell Quarry Landfill
RVAAP	Ravenna Army Ammunition Plant
SAIC	Science Applications International Corporation
SAP	Sampling and Analysis Plan
SC	Site Closeout
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
SWPPP	Storm Water Pollution Prevention Plan
TNT	2,4,6-trinitrotoluene
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAEC	United States Army Environmental Center
USEPA	United States Environmental Protection Agency
UXO	Unexploded Ordnance
WBG	Winklepeck Burning Grounds

1.0 INTRODUCTION

Science Applications International Corporation (SAIC) has been contracted by the United States Army Corps of Engineers (USACE), Louisville District to provide environmental services to achieve remedy complete (RC), remedy in place (RIP), or site closeout (SC) for soil and dry sediment at six environmental areas of concern (AOCs) within the Ravenna Army Ammunition Plant (RVAAP) in Ravenna, Ohio. These six environmental AOCs all scored “High” in the Relative Risk Site Evaluation and are also considered “high priority AOCs.”

The Performance Work Statement (PWS) for the contract, dated February 10, 2005, originally specified that “interim closure” would be attained, which includes RC, RIP, or SC. Interim closure is specified in the PWS because the scope of the contract includes only soil and dry sediment at the six environmental AOCs and does not include surface water, wet sediment, or groundwater. Final decisions for soil and dry sediment prepared under this contract are final remedies for those media.

The six environmental AOCs are as follows:

- RVAAP-01 Ramsdell Quarry Landfill (RQL);
- RVAAP-02 Erie Burning Grounds (EBG);
- RVAAP-04 Open Demolition Area #2 (ODA2);
- RVAAP-12 Load Line 12 (LL12);
- RVAAP-16 Fuze and Booster Quarry Landfill/Ponds (FBQ); and
- RVAAP-49 Central Burn Pits (CBP).

This work is being performed under a firm-fixed price basis in accordance with United States General Services Administration (GSA) Environmental Advisory Services Contract GS-10-F-0076J, Delivery Order No. W912QR-05-F-0033 under a Performance-Based Acquisition (PBA) [formerly termed Performance-Based Contract (PBC)] awarded on March 22, 2005. The performance objectives of this PBA are to complete all necessary actions to achieve final remedy for soil and dry sediment at six environmental AOCs, as specified in the PWS issued by the U.S. Army on February 10, 2005 (USACE 2005a). Final remedies for other environmental media will be addressed under future decisions.

Planning and performance of all elements of this PBA will be in accordance with the requirements of the Director’s Final Findings and Orders (DFFO) dated June 10, 2004 (Ohio EPA 2004). The portion of the DFFO pertinent to this PBA is the requirement to develop a Remedial Investigation (RI) Report, Feasibility Study (FS), Proposed Plan (PP), Record of Decision (ROD), and implement remedial actions (if necessary) to achieve remedy for soil and dry sediment at each AOC in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the National Contingency Plan (NCP), and the DFFO.

1.1 PURPOSE AND OBJECTIVES

As part of this project, SAIC is tasked to submit a Project Management Plan (PMP). The PMP summarizes SAIC's overall technical and management approach to achieve the PWS performance objectives for soil and dry sediment at the six environmental AOCs and includes a project schedule (detailing deliverable target and milestone dates), project team roles and responsibilities, and a deliverable matrix in accordance with the performance objectives listed in the PWS (USACE 2005a). This PMP also addresses coordination with RVAAP Interested Parties, as well as other facility environmental and operational activities.

This PMP is considered a living document and will be updated, if necessary, after completion of major deliverable milestones to address significant changes to the overall technical and/or management approach. Updates to the PMP shall be noted as Revisions and sequentially numbered. The initial version of the PMP (dated July 2005) was designated as Revision 0. This update is Revision 1. The following bullets present changes made to the PMP:

- This PMP was updated to be compliant with the *Ravenna Army Ammunition Plant Submission Format Guidelines, Version 18.0* (Vista 2009).
- The General Facility Description and AOC Operational History/Description was moved to Section 1.0 and, consequently, all other sections moved up one section.
- The General Facility Description was changed per the standard language provided by Ohio Army National Guard (OHARNG) in May 2006.
- A summary of the current status of the project CERCLA actions was added to Section 2.2 as well as updated in Table 2-2.
- A discussion of the Non-Time Critical Removal Action (Non-TCRA) at CBP was added in Section 2.2.2.
- Permitting and notifications were added as part of the project execution in Section 3.1.
- The project organization, roles, and responsibilities were updated in Section 4.0.
- Table 6-1 and Figure 6-1 was updated to reflect current status of the project deliverable milestone schedule.
- A table presenting the contractual items and schedule extensions to date has been added to Section 6.

1.2 PROJECT MANAGEMENT PLAN ORGANIZATION

The remaining sections of this PMP are organized as follows:

- Section 2.0 Summary of Work and Remedial Approach;
- Section 3.0 Project Execution and Coordination;
- Section 4.0 Project Organization and Resources;
- Section 5.0 Project Reporting;
- Section 6.0 Project Schedule and Milestones; and
- Section 7.0 References.

Section 2.0 outlines the summary of work performed and work anticipated for each AOC to achieve RC, RIP, or SC. Section 3.0 summarizes execution and coordination activities. SAIC will manage the project with the team organization and resources described in Section 4.0. Project reporting requirements and communication are described in Section 5.0. An updated project schedule and project milestones are presented in Section 6.0.

1.3 GENERAL FACILITY DESCRIPTION

When the RVAAP Installation Restoration Program (IRP) began in 1989, RVAAP was identified as a 21,419-acre installation. The property boundary was resurveyed by OHARNG over a 2-year period (2002 and 2003) and the 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 has been transferred to the National Guard Bureau (NGB) and subsequently licensed to OHARNG for use as a military training site.

The current RVAAP consists of 1,280 acres scattered throughout the OHARNG Camp Ravenna Joint Military Training Center (Camp Ravenna). Camp Ravenna is in northeastern Ohio within Portage and Trumbull Counties, approximately 3 miles (4.8 km) east-northeast of the City of Ravenna and approximately 1 mile (1.6 km) northwest of the City of Newton Falls. The RVAAP portions of the property are solely located within Portage County. RVAAP/Camp Ravenna is a parcel of property approximately 11 miles (17.7 km) long and 3.5 miles (5.6 km) 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 (Figures 1-1 and 1-2). Camp Ravenna is surrounded by several communities: Windham on the north; Garrettsville 6 miles (9.6 km) to the northwest; Newton Falls 1 mile (1.6 km) to the southeast; Charlestown to the southwest; and Wayland 3 miles (4.8 km) to the south.

When RVAAP was operational, Camp Ravenna did not exist and the entire 21,683-acre parcel was a government-owned, contractor-operated industrial facility. The RVAAP IRP encompasses investigation and cleanup of past activities over the entire 21,683 acres of the former RVAAP. References to RVAAP in this document are considered to be inclusive of the historical extent of RVAAP, which is inclusive of the combined acreages of the current Camp Ravenna and RVAAP, unless otherwise specifically stated.

Industrial operations at the former RVAAP consisted of 12 munitions-assembly facilities referred to as “load lines.” Load Lines 1 through 4 were used to melt and load 2,4,6-trinitrotoluene (TNT) and Composition B into large-caliber shells and bombs. The operations on the load lines produced explosive dust, spills, and vapors that collected on the floors and walls of each building. Periodically, the floors and walls were cleaned with water and steam. Following cleaning, the waste water, containing TNT and Composition B, was known as “pink water” for its characteristic color. Scupper systems were used to collect pink water, which was contained in concrete holding tanks, filtered, and pumped into unlined ditches for transport to earthen settling ponds. However, in some instances, pink water was swept from doorways, or scupper systems overflowed onto the ground surface. Load Lines

5 through 11 were used to manufacture fuzes, primers, and boosters. Potential contaminants in these load lines include lead compounds, mercury compounds, and explosives. From 1946 to 1949, Load Line 12 was used to produce ammonium nitrate for explosives and fertilizers prior to use as a weapons demilitarization facility.

In 1950, the facility was placed in standby status and operations were limited to renovation, demilitarization, and normal maintenance of equipment, along with storage of munitions. Production activities were resumed from July 1954 to October 1957 and again from May 1968 to August 1972. In addition to production missions, various demilitarization activities were conducted at facilities constructed at Load Lines 1, 2, 3, and 12. Demilitarization activities included disassembly of munitions and explosives melt-out and recovery operations using hot water and steam processes. Periodic demilitarization of various munitions continued through 1992.

In addition to production and demilitarization activities at the load lines, other facilities at RVAAP include AOCs that were used for the burning, demolition, and testing of munitions. These burning and demolition grounds consist of large parcels of open space or abandoned quarries. Potential contaminants at these AOCs include explosives, propellants, metals, and waste oils. Other types of AOCs present at RVAAP include landfills, an aircraft fuel tank testing facility, and various general industrial support and maintenance facilities.

1.4 AOC OPERATIONAL HISTORY/DESCRIPTION

RVAAP-01 Ramsdell Quarry Landfill: RQL is an unlined 10-acre (30 ft deep) former stone and ballast quarry. An Ohio EPA-permitted solid waste landfill occupies the western quarter of the AOC, and is currently under post-closure, long term monitoring (LTM). The landfill unit does not require remedial action. Reportedly, open burning of incendiary rounds and burning of 18,000 napalm rounds occurred in the bottom of the quarry. Potential munitions and explosives of concern (MEC) debris has been observed along the eastern quarry wall slope and south of the AOC.

RVAAP-02 Erie Burning Grounds: EBG is a 35-acre former burning ground used from 1941 to 1951 to thermally treat munitions such as bulk non-specification explosives, explosives-contaminated material, and bulk propellants. The AOC is currently estimated to be 60% aquatic habitat, much of which is high quality wetland. There are potential MEC issues at this AOC, although minimal MEC debris has been found to date.

RVAAP-03 Open Demolition Area #2: ODA2, which consists of approximately 25 acres, was used from 1948 to 1992 to detonate large caliber munitions and off-spec bulk explosives that could not be deactivated or demilitarized by any other means due to their condition. Past operations at this AOC may have included the burial of munitions and ordnance components. More recent burning and detonation activities related to facility operations occurred until 1994 in a 2.5-acre area covered under a Resource Conservation and Recovery Act (RCRA) permit application. Since 1994, this area has been used for non-routine and emergency detonations. MEC clearance to a depth of 4 ft (excavating and sifting) was performed in the RCRA-permitted area from 1999 to 2000. Closure of the RCRA

area will be performed under different actions, and is not part of the scope of this PBA. MEC and MEC debris is ubiquitous in the AOC, along portions of the Sand Creek embankment (which bisects the AOC) and as kickout fragments in adjacent areas. “Rocket Ridge” and adjacent riparian areas of Sand Creek have not been cleared of MEC. As such, Rocket Ridge and associated impacts will be addressed by different actions and is not part of the scope of this PBA.

RVAAP-12 Load Line 12: LL12 is an 80-acre, former ammonium nitrate manufacturing facility operational from 1941 to 1946. From 1941 to 1943, explosive grade ammonium nitrate was manufactured at LL12. Various production, renovation, and demilitarization operations were performed at a number of locations on the AOC after the termination of ammonium nitrate production in 1943. LL12 was leased by the Silas Mason Company from 1946 to 1949 to manufacture fertilizer-grade ammonium nitrate. Building 904 was used for demilitarization work and bomb melt out from 1949 to 1993. A pink water treatment plant located near Building 904 was taken out of service in 2000. From 1965 to 1967, Hercules Alcor, Inc. leased Building FF-19 to produce aluminum chloride. A former steam plant located in the southern portion of the AOC used fuel oil and coal at various times over the years as fuel. All buildings have been demolished to grade. An explosives composting pilot study in 1999 involved removal of about 1,500 ft³ of soil from four pits near Building 904, and composting at an off-AOC location.

RVAAP-16 Fuze and Booster Quarry Landfill/Ponds: FBQ operational activities took place from 1945 through 1993. The eastern part of the AOC consists of three larger ponds located in an abandoned rock quarry. The ponds are 20 to 30 feet deep and are separated by earthen berms. The western part of the AOC consists of 11 smaller, shallow basins. Prior to 1976, the quarry was reportedly used for open burning and as a landfill. The resultant debris from the burning and from the landfill operation was reported to have been removed during construction of the ponds. From 1976 through 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 National Pollutant Discharge Elimination System (NPDES) permit. In 1998, this AOC was expanded to include three other shallow settling ponds and two debris piles bringing the AOC to approximately 45 acres in size. The lands adjacent to the quarry were utilized as an impact area to test 40 mm projectiles (USACE 2005b).

RVAAP-49 Central Burn Pits: The CBP is an approximately 20-acre AOC used early in RVAAP history as a construction yard by Cleveland Builders Supply. Multiple areas within the site were later used to burn non-explosive combustible scrap, and to dump construction/industrial waste. Sand Creek forms the west boundary of the AOC. There are several (approximately 15) debris piles located in the central portion of the site, and another near the western edge of the AOC.

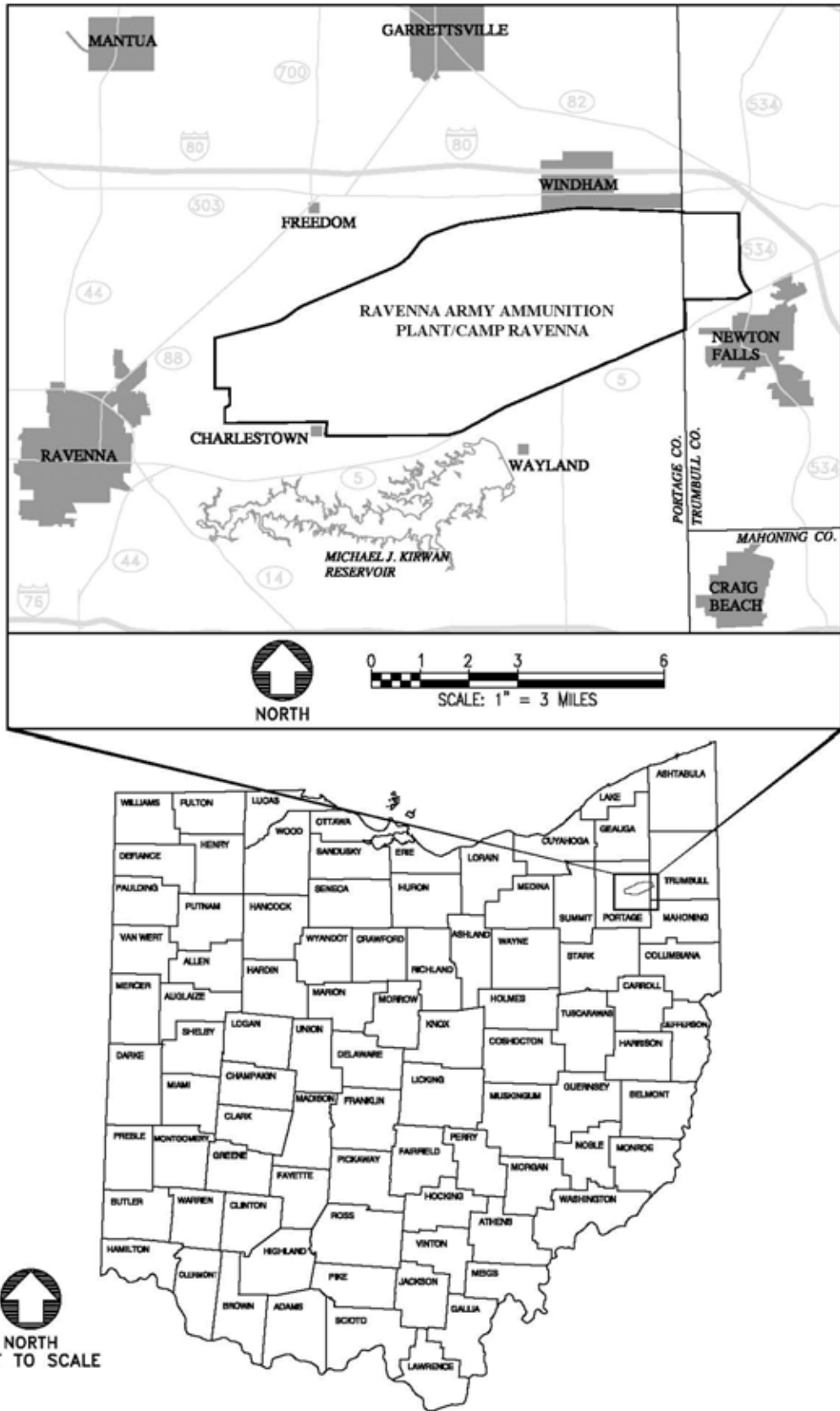


Figure 1-1. General Location and Orientation of RVAAP/Camp Ravenna

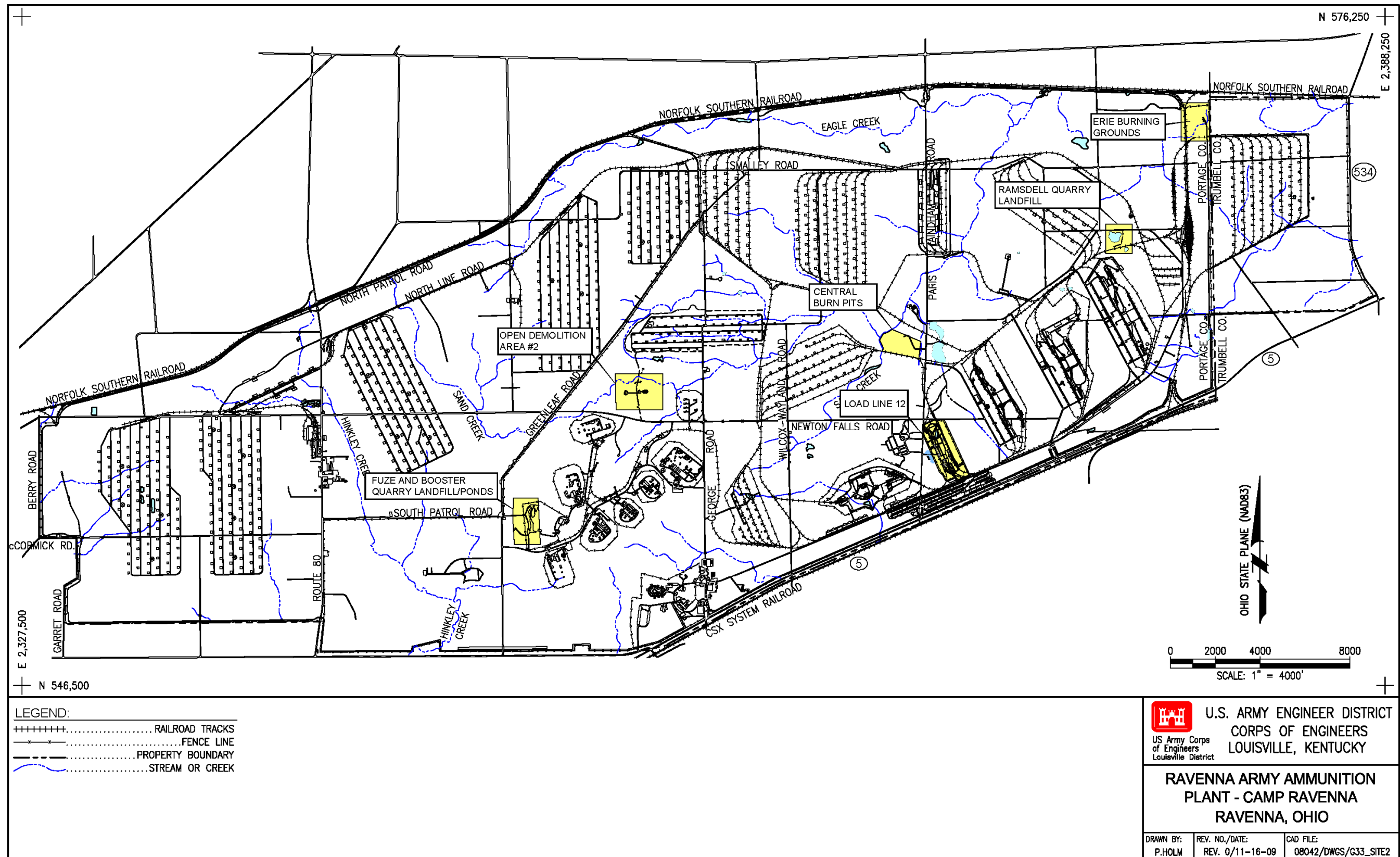


Figure 1-2. RVAAP/Camp Ravenna Facility Map

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2.0 SUMMARY OF WORK AND REMEDIAL APPROACH

This section summarizes the work performed to date and the technical approaches to achieve RC, RIP, or SC at each of the six environmental AOCs. All necessary CERCLA remediation and closure requirements with respect to soil and dry sediment either have been performed to date, or will be performed to meet this goal.

Although remediation of impacts to groundwater, surface water, and wet sediment were not addressed under this PBA, a preliminary evaluation of groundwater, surface water and wet sediment alternatives were included in the FSs, as appropriate. Any additional groundwater, surface water, and wet sediment investigation will be addressed in future investigations and actions, and are outside the scope of this PBA.

2.1 BASIC APPROACH TO ACHIEVE REMEDY FOR SOIL AND DRY SEDIMENT

The following steps summarize the activities and steps to achieve RC, RIP, or SC for soil and dry sediment at the six environmental AOCs:

- 1) Complete RI and prepare RI Report.
- 2) Prepare an FS recommending a remedial alternative, or prepare an addendum to the RI Report recommending no further action (NFA).
- 3) Present the recommended remedial alternative to the public by developing a PP, holding a 30-day public comment period, and presenting the alternative at a public meeting.
- 4) Develop a ROD presenting a responsiveness summary to public comments and selecting a remedy for review and signature by a U.S. Army representative and the Director of Ohio EPA.
- 5) Prepare a Remedial Design (RD) (if a remedial action is selected) to present a plan, specifications, and approach to implement the selected remedy.
- 6) Implement the Remedial Action (RA).
- 7) Submit a Remedial Action Report to document implementation activities, corrective actions, and verify that remedial action objectives (RAOs) were achieved. The Remedial Action Report (RAR) shall include a summary table of land use assumptions and remaining concentrations in soils to assist future five-year reviews and land transfer activities.

In the development of the technical approach to achieve RC, RIP, or SC for soil and dry sediment, SAIC utilized the following criteria to determine if an AOC required a remedial action:

- Presence of debris or disposed wastes that would be impediments to anticipated future land uses;
- Identification of chemicals of concern (COCs) that exceed human health RAOs for receptors specific to anticipated future land use (detailed in the RVAAP Facility-Wide Human Health Risk Assessor Manual [USACE 2004]);
- Determination if source removals are required to achieve protectiveness of ecological receptors; and

- Need for physical or administrative controls under anticipated future land uses to prohibit site access.

OHARNG has established future land uses for each of the six environmental AOCs based on anticipated training missions and the utilization of Camp Ravenna (USACE 2004). These anticipated future land uses form the basis for the remedial action technical approaches summarized in Table 2-1.

Table 2-1. Anticipated Future Land Uses for Six Environmental AOCs at RVAAP

Area of Concern	Land Use¹
RVAAP-01 Ramsdell Quarry Landfill	Restricted Access, No Digging
RVAAP-02 Erie Burning Grounds	Restricted Access, No Digging
RVAAP-04 Open Demolition Area #2	Restricted Access, No Digging
RVAAP-12 Load Line 12	Mounted Training, No Digging
RVAAP-16 Fuze and Booster Quarry Landfill/Ponds	Mounted Training, No Digging
RVAAP-49 Central Burn Pits	Dismounted Training, No Digging

¹OHARNG proposed land use - RVAAP Facility-Wide Human Health Risk Assessor Manual (USACE 2004)

Figure 2-1 illustrates the decision process for determining the need for remedial actions at the six environmental AOCs. From available risk assessment data, known or potential human health COCs at each AOC were identified. Soil exposure point concentrations (EPCs) of COCs at each AOC were compared to soil RAOs for the applicable receptors under the OHARNG anticipated land use. If a RAO exceedance was identified, a corresponding remedial action was proposed as an initial approach. In addition, if the AOC-specific receptors included exposures to surface water or sediment, RAO exceedances for those media were evaluated to determine if source remediation was required to reduce contaminant migration to those media and exposure risk.

For the protection of ecological receptors, ecological RAOs were based on a comparison of the benefit of risk reductions gained relative to any habitat degradation resulting from a remedial action or the future anticipated land use. Where applicable, corresponding ecological risk reductions resulting from soil removals to attain human health RAOs were also considered.

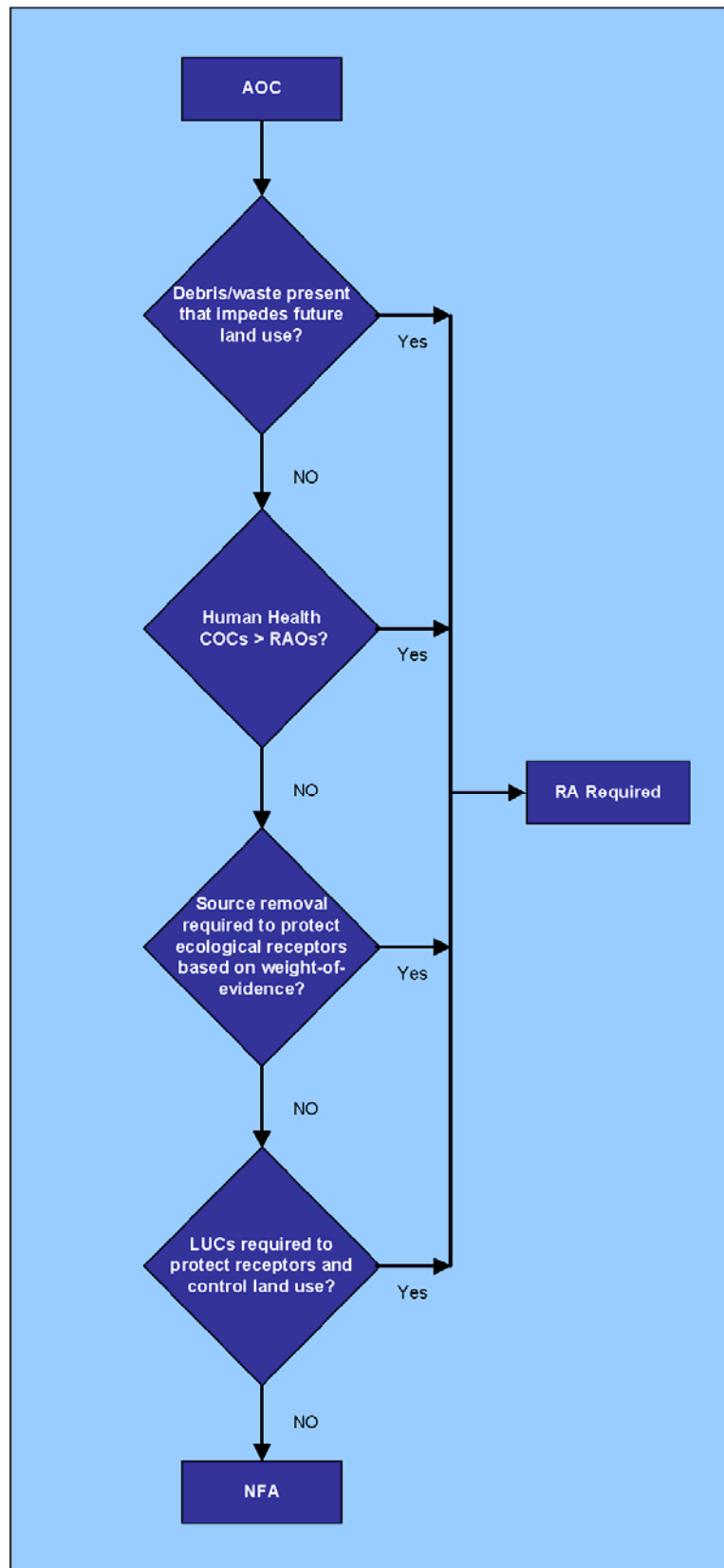


Figure 2-1. Decision Process to Identify the Need for Remedial Action

2.2 CURRENT STATUS OF CERCLA ACTIONS

The following sections present the current status of activities required to RC, RIP, or SC for soil and dry sediment for each AOC. Table 2-2 also summarizes these activities.

2.2.1 Actions Completed and Current Status of CERCLA Actions

Step 1 – Complete RI and RI Report: Three AOCs (RQL, EBG, and LL12) had adequate characterization data to complete the nature and extent evaluation in an RI Report. Three AOCs (ODA2, FBQ, and CBP) had additional surface and subsurface sampling conducted to complete the nature and extent of contamination. Additionally, debris piles at CBP were sampled for characterization and disposition purposes. The sampling results of the debris piles required the implementation of a Non-TCRA, further explained in Section 2.2.2.

Current Status - All six AOCs have complete and approved RI Reports.

Step 2 – Prepare FS or RI Addendum: Three AOCs (RQL, LL12, and FBQ) required a remedial action to achieve RC, RIP, or SC for soil and dry sediment. The appropriate range of remedial actions to reduce risks to the environment and human health for soil and dry sediment were developed and evaluated in an FS. In addition, a preliminary evaluation of alternatives to protect groundwater and surface water resources were included in the FSs. The remaining AOCs (EBG, ODA2, and CBP) required no further action for soil and dry sediment. Therefore, an RI Addendum was developed for each AOC to update the risk evaluation to justify the need for no further action at a given AOC. The FSs and RI Addendums included a weight-of-evidence approach to support not calculating ecological RAOs, and risk reductions gained through soil removals to attain human health RAOs

Current Status - All FSs and RI Addendums have been completed and approved.

Step 3 – Public Coordination: SAIC developed a PP for each AOC. The PP presented the preferred alternative for soil and dry sediment. Once the PPs were reviewed and approved by the RVAAP Interested Parties, the PPs were issued for public review and comment during a 30-day public comment period and at public meetings. Where necessary and practical, SAIC combined public meetings to present multiple AOCs and the respective preferred plan. In all, SAIC held three different public meetings under this contract.

Current Status - All six PPs have been reviewed, approved, and presented to the public.

Step 4 – Prepare Record of Decision: The selected remedy, future land use, and associated land use controls (LUCs) were documented into a ROD specific to each AOC. The selected remedy considered all public comments provided during the public comment period and public meeting. A Responsiveness Summary addressing these public comments was prepared as part of the RODs.

Current Status - All six RODs were reviewed and signed by the appropriate U.S. Army personnel and the Director of the Ohio EPA.

Step 5 – Prepare a Remedial Design: Upon approval of the selected remedy in the ROD, SAIC is to prepare and submit an RD specific to each AOC requiring a remedial action (RQL, LL12, and FBQ). The RDs ensure constructability and will streamline implementation. The RDs include a brief description of activities, construction drawings with appropriate construction specifications included as notes on the design drawings, and confirmation sampling protocols and objectives. The RD also will address health and safety, quality assurance (QA), and procedures (including coordination with others on-site).

Current Status - At the submission of this revision of the PMP, the RDs for LL12 and FBQ have been reviewed and approved. The RQL RD is pending.

Step 6 – Implement the Remedial Action: Upon approval of the RD, SAIC will implement the remedial activities.

Current Status - At the submission of this revision of the PMP, the remedial action at FBQ has been implemented. Implementation of the RQL and LL12 remedial activities are pending.

Step 7 – Prepare Remedial Action Reports: Upon completion of remedial activities, an RAR shall be prepared documenting implementation in accordance with the RD (i.e., complying with requirements, technical specifications, construction drawings, and other relevant contract documents), remedy of the AOC, corrective actions, and achievement of RAOs. The RAR shall include a summary table of land use assumptions and remaining concentrations in soils to assist future five-year reviews and land transfer activities.

Current Status - At submission of this revision of the PMP, all RARs are pending.

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Table 2-2. Summary and Status of Proposed Remedial Action Technical Approaches for Six Environmental AOCs at RVAAP

Area of Concern (Land Use)	Complete RIs and RI Reports	Complete Feasibility Study or RI Addendum	Complete Proposed Plan, Public Meeting, and Public Comment Period	Complete Record of Decision	Complete Remedial Design	Implement Remedial Action
RVAAP-01: Ramsdell Quarry Landfill (Restricted Access – No Digging)	No additional investigation was required. Completed the <i>Phase I Remedial Investigation Report for Ramsdell Quarry Landfill</i> .	Completed the <i>Feasibility Study for Ramsdell Quarry Landfill (RVAAP-01)</i> recommending Excavation of Soils/Dry Sediments and Offsite Disposal for Security Guard/Maintenance Worker Land Use.	Completed the <i>Proposed Plan for Soil and Dry Sediment at the Ramsdell Quarry Landfill (RVAAP-01)</i> . Public comment period held from 4/4/07 to 5/3/07. Public meeting held on 4/10/07.	Completed the <i>Record of Decision for Soil and Dry Sediment for the RVAAP-01 Ramsdell Quarry Landfill</i> .	Remedial design is under review by RVAAP Interested Parties.	Excavate contaminated soil at the bottom of the quarry until cleanup goals/objectives are achieved. The remedial design estimates 1608 cubic yards of soil will require removal. Prepare Remedial Action Report after the remedial activities are complete.
RVAAP-02: Erie Burning Grounds (Restricted Access – No Digging)	No additional investigation was required. Completed the <i>Phase II Remedial Investigation Report for Erie Burning Grounds (RVAAP-02)</i> .	Completed the <i>Addendum to the Phase II Remedial Investigation Report for Erie Burning Grounds (RVAAP-02)</i> recommending No Further Action for soil and dry sediment.	Completed the <i>Proposed Plan for Soil and Dry Sediment at Erie Burning Grounds (RVAAP-02)</i> . Public comment period held from 3/7/07 to 4/5/07. Public meeting held on 3/13/07.	Completed the <i>Record of Decision for Soil and Dry Sediment at the Erie Burning Grounds (RVAAP-02)</i> .	Not applicable as the ROD required No Further Action for soil and dry sediment.	Not applicable as the ROD required No Further Action for soil and dry sediment.
RVAAP-03: Open Demolition Area #2 (Restricted Access – No Digging)	Implemented the <i>Sampling and Analysis Plan Addendum No. 1 Supplemental Phase II Remedial Investigation for Open Demolition Area #2 (RVAAP-02), Fuze and Booster Quarry Landfill/Ponds (RVAAP-16), and Central Burn Pits (RVAAP-49)</i> in November 2005 to collect surface and subsurface soil samples. Completed the <i>Phase II Remedial Investigation Report for the Open Demolition Area #2 (RVAAP-04)</i> .	Completed the <i>Addendum to the Phase II Remedial Investigation Report for Open Demolition Area #2 (RVAAP-04)</i> recommending No Further Action for soil and dry sediment.	Completed the <i>Proposed Plan for Soil and Dry Sediment at Open Demolition Area #2 (RVAAP-04)</i> . Public comment period held from 3/7/07 to 4/5/07. Public meeting held on 3/13/07.	Completed the <i>Record of Decision for Soil and Dry Sediment at the Open Demolition Area #2 (RVAAP-04)</i> .	Not applicable as the ROD required No Further Action for soil and dry sediment.	Not applicable as the ROD required No Further Action for soil and dry sediment.
RVAAP-12: Load Line 12 (Mounted Training – No Digging)	No additional investigation was required. Completed the <i>Phase II Remedial Investigation Supplemental Report for Load Line 12 (RVAAP-12)</i> .	Completed the <i>Feasibility Study for Load Line 12 (RVAAP-12)</i> recommending Excavation of Soils/Dry Sediments and Offsite Disposal for National Guard Trainee Land Use.	Completed the <i>Proposed Plan for Soil and Dry Sediment at Load Line 12 (RVAAP-12)</i> . Public comment period held from 4/4/07 to 5/3/07. Public meeting held on 4/10/07.	Completed the <i>Record of Decision for Soil and Dry Sediment for the RVAAP-12 Load Line 12</i> .	Remedial design is under review by RVAAP Interested Parties.	Excavate contaminated sediment within the Main Ditch aggregate until cleanup goals/objectives are achieved. The remedial design estimates 706 cubic yards of sediment will require removal. Prepare Remedial Action Report after the remedial activities are complete.

Table 2-2. Summary and Status of Proposed Remedial Action Technical Approaches for Six Environmental AOCs at RVAAP (continued)

AOC (Land Use)	Complete RIs and RI Reports	Complete Feasibility Study or RI Addendum	Complete Proposed Plan, Public Meeting, and Public Comment Period	Complete Record of Decision	Complete Remedial Design	Implement Remedial Action
<p>RVAAP-16: Fuze and Booster Quarry Landfill/Ponds (Mounted Training – No Digging)</p>	<p>Implemented the <i>Sampling and Analysis Plan Addendum No. 1 Supplemental Phase II Remedial Investigation for Open Demolition Area #2 (RVAAP-02), Fuze and Booster Quarry Landfill/Ponds (RVAAP-16), and Central Burn Pits (RVAAP-49)</i> in November 2005 to collect surface and subsurface soil samples.</p> <p>Completed the <i>Phase I/Phase II Remedial Investigation of the Fuze and Booster Quarry Landfill/Ponds (RVAAP-16)</i>.</p>	<p>Completed the <i>Feasibility Study for Fuze and Booster Quarry Landfill/Ponds (RVAAP-16)</i> recommending Excavation of Soils/Dry Sediments and Offsite Disposal for Residential Land Use.</p>	<p>Completed the <i>Proposed Plan for Soil and Dry Sediment at Fuze and Booster Quarry Landfill/Ponds (RVAAP-16)</i>.</p> <p>Public comment period held from 4/4/07 to 5/3/07.</p> <p>Public meeting held on 4/10/07.</p>	<p>Completed the <i>Record of Decision for Soil and Dry Sediment at the Fuze and Booster Quarry Landfill/Ponds (RVAAP-16)</i>.</p>	<p>Completed the <i>Remedial Design for the RVAAP-16 Fuze and Booster Quarry Landfill/Ponds</i>.</p>	<p>Excavate contaminated sediment within the Drainage Ditch aggregate until cleanup goals/objectives are achieved. The remedial design estimates 163 cubic yards of sediment will require removal.</p> <p>Prepare Remedial Action Report after the remedial activities are complete.</p>
<p>RVAAP-49: Central Burn Pits (Dismounted Training – No Digging)</p>	<p>Implemented the <i>Sampling and Analysis Plan Addendum No. 1 Supplemental Phase II Remedial Investigation for Open Demolition Area #2 (RVAAP-02), Fuze and Booster Quarry Landfill/Ponds (RVAAP-16), and Central Burn Pits (RVAAP-49)</i> in November 2005 to collect surface and subsurface soil samples and multi-increment samples at debris piles and berms.</p> <p>Completed the <i>Remedial Investigation Report for the Central Burn Pits (RVAAP-49)</i>.</p>	<p>Implemented the Non-Time Critical Removal Action process, as described in Section 2.2.2.</p> <p>Completed the <i>Remedial Investigation Report Addendum No. 1 for the RVAAP-49 Central Burn Pits</i> recommending No Further Action for soil and dry sediment.</p>	<p>Completed the <i>Proposed Plan for Soil and Dry Sediment at Central Burn Pits (RVAAP-49)</i>.</p> <p>Public comment period held from 12/8/08 to 1/7/09.</p> <p>Public meeting held on 12/16/08.</p>	<p>Completed the <i>Record of Decision for Soil and Dry Sediment at the Central Burn Pits (RVAAP-49)</i>.</p>	<p>Not applicable as the ROD required No Further Action for soil and dry sediment.</p>	<p>Not applicable as the ROD required No Further Action for soil and dry sediment.</p>

2.2.2 Non-Time Critical Removal Action at the Central Burn Pits

One deviation of the CERCLA process was implementing a Non-TCRA to remove two debris piles at CBP. Supplemental Phase II RI field activities were conducted in 2005 to further define nature and extent of soil contamination at CBP. During these field activities, samples were collected from the debris piles and berms to assess potential disposition requirements and options. Results indicated concentrations of lead and hexavalent chromium in two debris piles (Piles M and N respectively) were sufficiently high that the materials were considered principal threat wastes.

The U.S. Army and Ohio EPA elected to address these debris piles under a Non-TCRA due to likelihood of contaminant dispersal and migration from the piles to surrounding environmental media. The removal action followed the guidelines of the United States Environmental Protection Agency (USEPA) (USEPA 2000). Figure 2-2 presents the flowchart of the path taken to implement the Non-TCRA at CBP and ultimately achieve site closeout for soil and dry sediment.

An Engineering Evaluation/Cost Analysis (EE/CA) (USACE 2007a) was developed to evaluate alternatives for removal of Piles M and N. This evaluation included assessing the technologies available, identifying applicable and relevant or appropriate requirements (ARARs), and comparing cost estimates. Two removal action alternatives were developed (No Action and Excavation of Waste Piles with Off-site Treatment and Disposal). At the completion of the analysis, the EE/CA recommended proceeding with Removal Action Alternative 2: Excavation of Waste Piles with Off-site Treatment and Disposal.

The CBP Action Memorandum (USACE 2007b) documented the selected removal action alternative to excavate Piles M and N with off-site treatment and disposal. This Action Memorandum also outlined the removal action objectives and cleanup goals. The Action Memorandum included a Responsiveness Summary addressing public comments received during the public comment period held from March 7, 2007 to April 5, 2007. Following review and concurrence by the Ohio EPA, the Action Memorandum was signed by the U.S. Army on August 9, 2007.

The CBP Removal Action Work Plan (USACE 2007c) was developed to detail implementation of the Pile M and N removal. Implementation of the removal action work plan began in October 2007. Removal activities continued until March 2008, when soil sample analyses confirmed the removal action cleanup goals were achieved. Non-hazardous soil was disposed at the American Landfill in Waynesburg, Ohio. The characteristically hazardous soil was hauled off-site to Lambton (Sarnia) Landfill in Ontario, Canada. There, the soil was treated to meet land disposal restrictions and disposed at the landfill. Table 2-3 presents the removal totals from Piles M and N.

Table 2-3. Pile M and N Removal Totals

Debris Pile	Waste Volume (tons)		
	Non-hazardous	Hazardous	Total
Pile M	496	50	546
Pile N	157	0	157

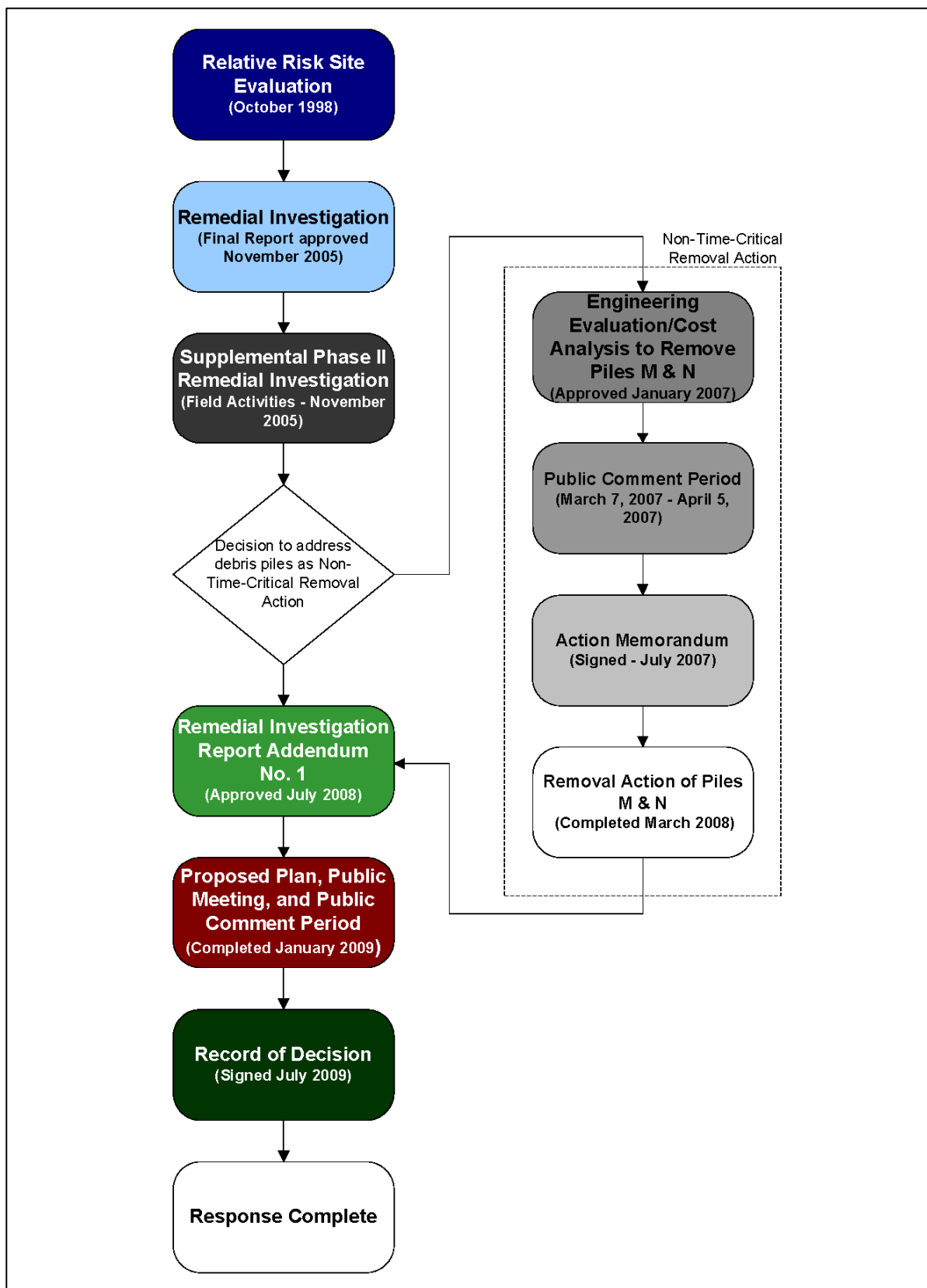


Figure 2-2. Central Burn Pits Activity Flowchart

3.0 PROJECT EXECUTION AND COORDINATION

3.1 PROJECT EXECUTION

This PMP will be updated, if necessary, after completion of major deliverable milestones to address significant changes to the overall technical and/or management approach. The updated PMP will be distributed to all RVAAP Interested Parties. Updates to the PMP shall be noted as Revisions, sequentially numbered. The initial PMP was designated as Revision 0 (USACE 2005c).

The following activities and deliverables have either been performed or will be performed in support of this project:

- Project Kick-Off Meeting and Meeting Minutes;
- Monthly Progress Reports (including schedule updates);
- Teleconference Progress Updates (agenda and meeting minutes);
- Schedule Updates (coordinated by USACE, updates provided by SAIC);
- PMP (updated as required);
- RI Reports;
- Work Plan Addenda;
- FSs or RI Addendums;
- PPs;
- RODs;
- RDs;
- Remedial Actions; and
- RARs.

All work performed at these six environmental AOCs shall follow this PMP and shall be performed in accordance with the following documents developed for RVAAP:

- DFFO (Ohio EPA 2004);
- RVAAP's Facility-Wide Human Health Risk Assessor Manual (USACE 2004);
- Facility-Wide Ecological Risk Assessment Work Plan (USACE 2003a);
- Facility-Wide Sampling and Analysis Plan (SAP) (USACE 2001b);
- Facility-Wide Health and Safety Plan (USACE 2001a);
- Facility-Wide Groundwater Monitoring Program Plan (Portage Environmental 2004); and
- RVAAP Community Relations Plan (USACE 2003b).

SAIC implements a rigorous QA Program following the structure of national reference standards and is compliant with ISO-9001 and USEPA QA R-5. In conjunction with this PMP, the Facility-Wide Quality Assurance Project Plan (QAPP) (located in the Facility-Wide Sampling and Analysis Plan [USACE 2001b]), and USACE's Construction Quality Management (CQM) Program, SAIC will

apply the QA Program to this project to ensure high quality products and results are obtained. Preparation, review, and approval of documents affecting quality will be developed accordingly to ensure adequate procedures or guidelines are provided to perform the intended activities.

SAIC will prepare project work plans prior to the start of any field work for both field sampling activities and remedial activities. Previously approved facility documents will be cited where appropriate to facilitate and expedite document review. These plans will be submitted to the U.S. Army and Ohio EPA for review and approval prior to the initiation of field activities and, at a minimum, will address the following elements:

- Detailed description of activities;
- Health and safety (including MEC);
- QA/quality control (QC);
- Management of investigation-derived waste (IDW);
- Applicable permitting; and
- Storm water pollution prevention.

Additional details are provided in the following sections.

3.1.1 Sampling and Analysis Plans

SAIC prepared a SAP, prior to the start of field work at RVAAP to establish technical and QC requirements during environmental sampling and analysis for chemical constituents (e.g., additional delineation sampling, confirmation sampling). The SAP was prepared under the standards of performance outlined in the RVAAP Facility-Wide SAP (USACE 2001b) and complied with USACE and Ohio EPA requirements. Any unique sampling requirements not covered under the RVAAP Facility-Wide SAP, such as multi-increment sampling techniques or composite sampling from stockpiled soil, were addressed in the task-specific SAP.

During SAP development, the utilization of discrete data versus multi-increment sampling data was evaluated on a case-by-case basis. Sampling objectives were established, and the appropriate method to satisfy the objectives were identified for each sampling activity. The evaluation considered the following factors:

- How much discrete sampling has previously been performed;
- Uniformity/consistency of the results of this sampling; and
- Comparison of measured concentrations of residual contamination to RAOs.

3.1.2 Site Safety and Health Plans

SAIC has and will continue to develop Site Safety and Health Plans (SSHP) for each appropriate task of the project (e.g., implementation of the RDs) which will be prepared under the Facility-Wide Health and Safety Plan. Each SSHP will include emergency response, contingency plans, and

emergency contacts. Each SSHP will meet the requirements of federal, state, and local regulations, and will identify safety and health regulations applicable to the work.

SAIC will ensure all employees, subcontractors, and on-site suppliers follow all provisions established in approved SSHPs. SAIC understands that the U.S. Army and Ohio EPA retain Stop Work Authority for any observed violations or non-compliance with the SSHP pending corrective action. Each SSHP will include:

- Site description and contaminant characterization;
- Safety and health hazard assessment and risk analysis;
- Safety and health staff organization and responsibilities;
- Site specific training;
- Medical surveillance parameters;
- Personal protective equipment (PPE);
- Decontamination facilities and procedures;
- Monitoring and sampling requirements;
- Safety and health work precautions and procedures;
- Site control measures;
- On-site first aid and emergency equipment;
- Emergency response plans and contingency procedures (both on-site and off-site);
- Documentation and record keeping;
- Authorization to all workers to stop work for non-compliance with safety standards; and
- Map and driving directions to the nearest hospital.

3.1.3 Permitting and Notifications

Prior to implementation of remedial activities, SAIC will prepare and submit all applicable State of Ohio and federal construction permits and notifications. The applications and/or notifications will be reviewed by RVAAP, USACE and OHARNG prior to submittal to the appropriate agency. The following notifications and permits may be required at RVAAP based on the remedial actions:

- U.S. Fish and Wildlife Service permits;
- State of Ohio Historic Preservation Office Form S106;
- Ohio EPA Notifications (e.g., NPDES Construction Storm Water, Isolated Wetland); and
- Notification to USACE-Pittsburgh District for remedial actions within Jurisdictional Wetlands.

3.1.4 Quality Control Plans

Prior to the start of field sampling activities, SAIC prepared a quality control plan tiered under the existing RVAAP Facility-Wide QAPP (located in the Facility-Wide SAP [USACE 2001b]) to ensure field sampling activities were implemented in accordance with the appropriate procedures. Prior to initiation of remedial activities, SAIC will develop a Contractor Quality Assurance Plan (CQAP).

The CQAP will be incorporated into the RD and will guide the performance of work activities by all personnel, including subcontractors. Applicable requirements of the USACE CQM Program will be integrated into the CQAP. Implementation of CQM will ensure remedial activities are performed in accordance with cost and schedule specifications.

3.1.5 Storm Water Pollution Prevention Plans

SAIC will prepare a Storm Water Pollution Prevention Plan (SWPPP) for remedial activities disturbing greater than one acre (including construction support areas) as part of the RD. The SWPPP will establish the procedures and controls to prevent storm water run-on and run-off, to minimize erosion of site soils, to prevent sediment transport and accumulation, and to protect adjacent drainage ways during intrusive field work activities in accordance with all applicable federal, state, and local requirements. If the disturbed area is less than one acre, storm water best management practices will be included as part of the RD.

3.2 SITE LOGISTICS AND COORDINATION

Subcontractor Coordination: During any week which SAIC (including SAIC subcontractors) performs any site work at RVAAP/Camp Ravenna, a representative will attend the weekly contractor meeting. These meetings are designed to facilitate coordination of various contractor activities occurring at RVAAP/Camp Ravenna. SAIC and its subcontractor(s) will coordinate to the best of their ability with other subcontractors performing work at RVAAP/Camp Ravenna.

Fall Deer Hunting: SAIC will not perform any site work during the weekends Camp Ravenna allows deer hunting.

Clearances: In order to ensure the security and orderly running of RVAAP/Camp Ravenna, any contractors, consultants, or visitors who wish to gain access to the facility will follow procedures established by RVAAP/Camp Ravenna and the facility caretaker contractor.

Deliveries: SAIC will notify the facility management 24-hours in advance of any deliveries to RVAAP/Camp Ravenna. SAIC understands that all trucks are subject to search by Camp Ravenna security at any time. All personnel associated with this project will observe and obey posted speed limits at RVAAP/Camp Ravenna or default to 35 mph during daylight hours and 25 mph during nighttime hours.

Smoking: Smoking is allowed only in designated areas of RVAAP/Camp Ravenna.

Communication: The use of walkie-talkies and cell phones are permitted at RVAAP/Camp Ravenna; however, personnel will have a backup form of communication in the event service is not provided in the work area.

Hazardous and Nonhazardous Waste: Contractors are required to remove non-hazardous trash brought to or generated at RVAAP/Camp Ravenna during work. Hazardous materials require manifest to be removed from RVAAP/Camp Ravenna. The facility management will generate manifests for all wastes generated under this project.

Food: Food shall only be consumed in designated areas at RVAAP/Camp Ravenna.

3.3 GOVERNMENT FURNISHED RESOURCES

SAIC shall continue to coordinate with the U.S. Army, OHARNG, and the site operating contractor to gain access to the facility and to available infrastructure and utilities as required for execution of this project. The Government will provide the following resources to SAIC, if available: pertinent records, reports, data, analysis, and information, in their current format (e.g., hardcopy, electronic, tape, disks, CDs). These resources will facilitate development of a complete and accurate assessment of current, former and historical site activities and operations, waste generation and contaminant characteristics, parameters of interest, site environmental conditions, access to appropriate personnel to conduct interviews on facility operations and activities, and access to all applicable Department of Defense (DoD) and U.S. Army policy and guidance documents.

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4.0 PROJECT ORGANIZATION AND RESOURCES

4.1 PROJECT ORGANIZATION, ROLES, AND RESPONSIBILITIES

SAIC will be responsible for the execution of this project. The project team is shown in Figure 4-1. The project team organizational chart displays the management and technical roles for this project, as well as the personnel responsible for the execution of key project work elements. Below is a description of the key project positions identified in the chart.

Project Manager: The Project Manager for this project is Jed Thomas, PE. The Project Manager serves as the point of contact for all RVAAP Interested Parties. The Project Manager is responsible for the completion of the project in accordance with the contract and regulatory requirements. The Project Manager is also responsible for the coordination of schedules, cost tracking, and preparation of submittals.

Deputy Project Manager: The Deputy Project Manager for this project is Tia Rutledge. The Deputy Project Manager will assist the Project Manager in ensuring project execution in accordance with the contract and regulatory requirements. The Deputy Project Manager will support coordination of schedules, cost tracking, and preparation of submittals.

RI/FS and Decision Document Leads: The primary leads for this project are Kevin Jago, PG and Mike Poligone, PE. The RI/FS and Decision Document leads coordinate development and completion of the various documents in accordance with the approach summarized in this PMP and required by subsequent discussions with the U.S. Army and Ohio EPA to achieve project objectives and approvals.

Risk Assessors: The lead for Human Health Risk Assessment (HHRA) activities is Samantha Pack. The lead for ecological risk assessment activities is Dr. Barney Cornaby. The Risk Assessors support the RI/FS and decision document process in developing risk-based analyses and determination of risk-based remediation goals.

Design Engineer and Remediation Supervisor: The Design Engineer and Remediation Supervisor for this project are Tia Rutledge and Corey Pacer, P.E. They are responsible for the development of RDs and detailing remedial action activities for each AOC in conjunction with the remedial action implementation subcontractor. They are also responsible for completion of site operations in accordance with the approved plans and field work orders. The Design Engineer and Remediation Supervisor have full authorization to stop work and to demand corrective action based on non-compliance with the level of quality required by the plans.

Project QA Officer: The Project QA Officer for this project is Richard Sprinzl. The Project QA Officer is responsible for implementing project QA in accordance with SAIC's QA Program. The Project QA Officer is responsible for overseeing and approving any required project training during

the development of documents as well as implementation of field activities. These responsibilities include data verification and final project reports.

Site Safety and Health Officer: The Site Safety and Health Officer (SSHO) is Heather Miller. The SSHO prepares the SSHP addenda for the necessary site work. The SSHO is responsible for the implementation of the SSHP and conducts site inspections to ensure compliance with Federal, State, and Occupational Safety & Health Administration (OSHA) regulations and all aspects of the SSHP including activity hazard analyses, air monitoring, use of PPE, decontamination, site control, standard operating procedures used to minimize hazards, safe use of engineering controls, the emergency response plan, and spill containment program. The SSHO ensures all personnel are properly trained for their assigned tasks for all work performed. The SSHO has full authorization to stop work and to demand corrective action for non-compliance with the SSHP.

4.2 SUBCONTRACTOR MANAGEMENT

SAIC will implement this project using subcontractor arrangements with remedial action subcontractor, as well as any necessary drilling, laboratory, MEC Avoidance, and transportation and disposal subcontractors. Subcontracts will be carefully developed and reviewed by the Project Manager to reflect detailed scope and realistic performance objectives and specifications. Provisions of the basic contract, health and safety requirements, and QA/QC requirements will be flowed-down, as appropriate, to encourage beneficial performance and/or penalize poor performance. Field performance of all subcontractors will be monitored by the Remediation Supervisor and SSHO, who will record observations of progress and discuss project status daily with the Project Manager. Deviations will be addressed in accordance with the protocols specified in the relevant Work Plan(s). Negative performance trends will instigate an interim performance evaluation and a corrective action plan will be developed as required to bring schedule/cost performance back in line.

4.3 RVAAP INTERESTED PARTIES

SAIC will manage and coordinate this project to ensure all RVAAP Interested Parties are kept informed of the project status, existing or potential problems, and any changes that may be required to prudently manage the project and meet the needs of Interested Parties. RVAAP Interested Parties include:

- USACE – Louisville District (CELRL);
- RVAAP;
- United States Army Environmental Center (USAEC);
- OHARNG/Camp Ravenna;
- NGB;
- Ohio EPA;
- Base Realignment and Closure Division (BRACD) Office; and
- United States Army Center for Health Promotion and Preventive Medicine (USACHPPM).

4.4 PUBLIC INVOLVEMENT

SAIC will coordinate all public involvement activities through the current public participation process established by RVAAP, including the Restoration Advisory Board (RAB). All public involvement activities will be coordinated through the RVAAP Facility Manager, the USACE Louisville District Contracting Officer’s Representative (COR), and the Ohio EPA. These activities include preparation of briefings, presentations, fact sheets, newsletters, RAB tours, and articles to news media, if needed. SAIC will prepare information for public review at the request of the U.S. Army. The public will be provided the opportunity to comment on draft documents submitted to the Administrative Record as noted in Table 4-1. The U.S. Army requested public comments on the completed PPs for the six environmental AOCs, as required by the CERCLA regulatory process and the RVAAP Community Relations Plan. SAIC will continue to provide project descriptions and progress updates suitable for inclusion in the RVAAP public website, as requested by the COR and RVAAP.

4.5 PROJECT DELIVERABLES

The approved deliverable schedule is provided in Section 6.1 (Table 6-1). SAIC will coordinate the number of electronic and hard copy deliverables required for each document with the RVAAP Interested Parties. SAIC will address Ohio EPA and U.S. Army comments in a clear and concise manner. As requested by the Ohio EPA, the response to comments table will be very specific with regards to the changes being made in the document. SAIC will coordinate with the U.S. Army and Ohio EPA to efficiently address any comments made in preliminary draft and draft versions of documents.

Table 4-1 summarizes project submittals and approvals. SAIC shall complete all deliverables according to CERCLA/NCP and Ohio EPA requirements. SAIC shall obtain written or electronic approval of these documents by both Ohio EPA and the U.S. Army in accordance with the PWS (USACE 2005a).

Table 4-1. Deliverable Approval Matrix

Deliverable	U.S. Army	Ohio EPA	Public
<i>Project Kick-off Meeting Minutes</i>			
Final Meeting Minutes	A	C	---
<i>Project Management Plan</i>			
Final PMP (Revision 0)/Updates (subsequent revisions)	A	C	---
Project/Milestone Schedule	A	A	---
<i>Monthly Progress Reports</i>			
Final Monthly Progress Report	A	A	---
<i>Sampling and Analysis Plans</i>			
Preliminary Draft	C	---	---
Draft	C	C	P
Final	A	A	P

Table 4-1. Deliverable Approval Matrix (continued)

Deliverable	U.S. Army	Ohio EPA	Public
<i>Remedial Investigation Reports</i>			
Preliminary Draft	C	---	---
Draft	C	C	P
Final	A	A	P
<i>Feasibility Studies/Engineering Evaluations and Cost Analysis</i>			
Preliminary Draft	C	---	---
Draft	C	C	P
Final	A	A	P
<i>Proposed Plans/Action Memorandums</i>			
Preliminary Draft	C	---	---
Draft	C	C	P
Final	A	A	P*
<i>Records of Decision</i>			
Preliminary Draft	C	---	---
Draft	C	C	P
Final	A	A	P
<i>Remedial Designs/Removal Action Work Plans</i>			
Preliminary Draft	C	---	---
Draft	C	C	P
Final	A	A	P
<i>Remedial Action Reports/Removal Action Reports</i>			
Preliminary Draft	C	---	---
Draft	C	C	P
Final	A	A	P

A = Formal approval

C = Provide comment

--- = Does not review or provide comments

P = Available to the public via RVAAP Administrative Records

P* = Available for public comment to be documented in RVAAP Administrative Records

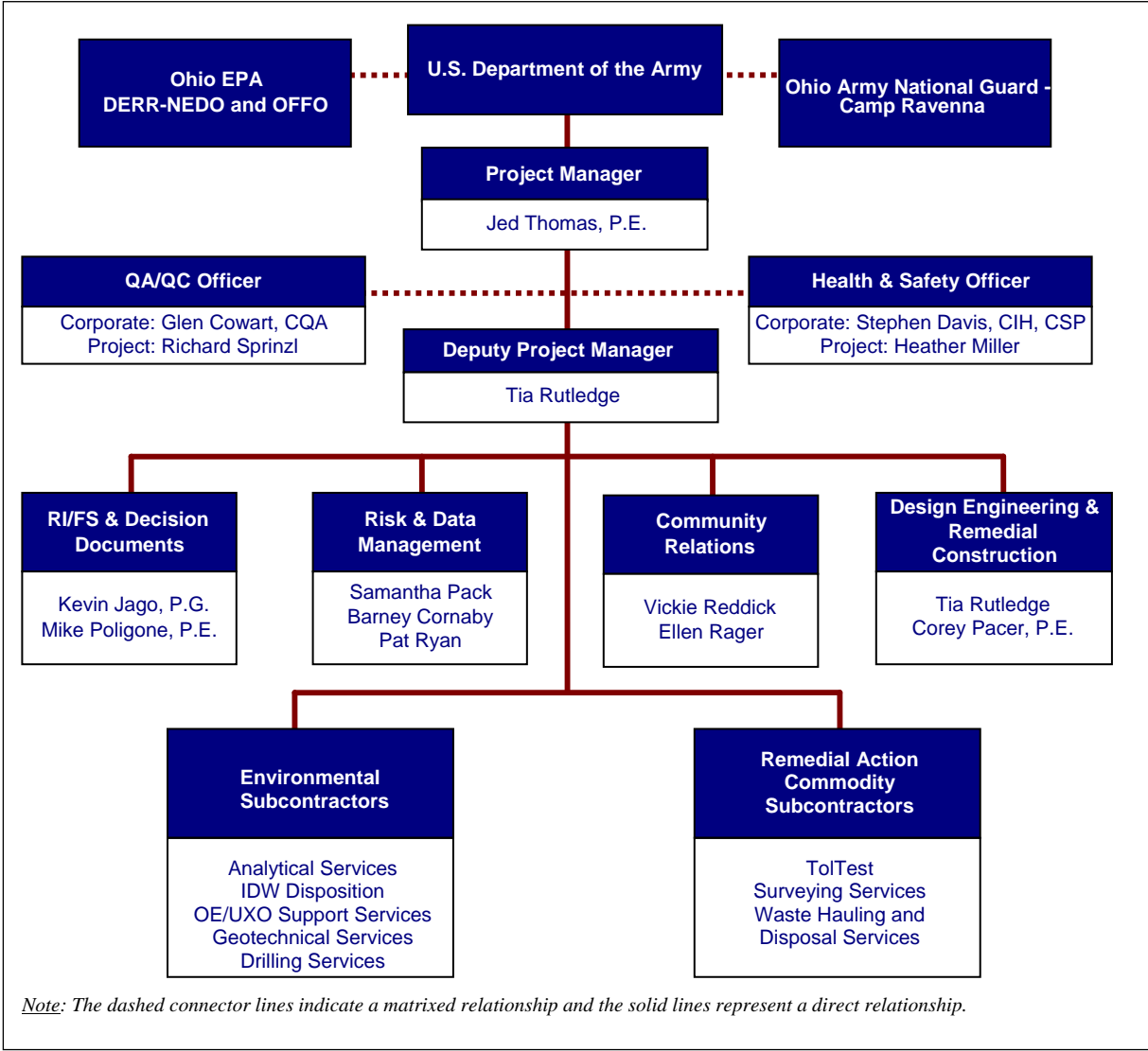


Figure 4-1. Project Organizational Chart

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5.0 PROJECT REPORTING

In an effort to communicate the progress, findings, and potential changes that may occur during the project, SAIC will communicate with all RVAAP Interested Parties during the established bi-weekly status meetings and the monthly progress reports.

5.1 BI-WEEKLY STATUS TELECONFERENCES

Starting the week of May 2, 2005, SAIC conducted bi-weekly status meetings with the RVAAP Interested Parties per the PWS by means of a conference call. The purpose of these meetings is to address the progress to date, summarize anticipated activities, address any problems or issues with regards to the project, and discuss any corrective actions. A standard agenda for this bi-weekly conference call will be issued at least two days prior to each call for review and comment. Upon the incorporation of comments to the agenda, a finalized agenda will be provided to the interested parties. The project status includes, but is not limited to:

- Work completed;
- Work scheduled;
- Technical issues;
- Regulatory challenges/issues;
- Issues that may hamper project schedule; and
- Any other project-related issues raised by any of the RVAAP Interested Parties.

SAIC will provide meeting minutes of the bi-weekly status meeting to all RVAAP Interested Parties.

5.2 MONTHLY PROGRESS REPORTS

As required by the DFFO, and unless otherwise specified in writing by Ohio EPA, a written progress report for every month is required to be delivered to Ohio EPA by the tenth day of the following month. To comply, SAIC shall provide a Monthly Progress Report to USACE by the fifth day of each month. USACE shall compile Monthly Progress Reports from all contractors to submit to Ohio EPA by the tenth day of each month. USACE has established a template for these monthly progress reports (Figure 5-1). As required by the DFFO, SAIC will use this template to, at a minimum:

- Describe the status of all projects being implemented and actions taken toward achieving compliance during the reporting period;
- Describe difficulties encountered during the reporting period and actions taken to rectify any difficulties;
- Describe activities planned for the following month;
- Identify changes in key personnel;
- List target and actual completion dates for each element of activity, including project completion;
- Provide an explanation for any deviation from any applicable schedules; and

- Note volume and disposition of any impacted media removed from RVAAP.

5.3 SCHEDULE UPDATES

Detailed working schedules for each AOC have been developed as part of this PMP that outline key project elements and due dates for all major deliverables. Since approval by the U.S. Army and Ohio EPA, these detailed project schedules are updated monthly to accurately reflect project progress, and schedule updates are forwarded bi-weekly to USACE. Additionally, SAIC shall participate in bi-weekly conference calls organized by USACE to apprise the RVAAP Project Team of progress.

5.4 RECORDS/DATA MANAGEMENT

SAIC will submit all data and documentation to SAIC's Central Records repository per SAIC's QA Program. All documents generated during the course of this project will be maintained in both electronic and hard copy. Electronic reports for submission to RVAAP Ravenna Environmental Information Management System (REIMS) will adhere to criteria for entry into the database. To the extent that residual contaminant is left in place at any of the subject AOCs, SAIC will meet DoD and CERCLA requirements for records management to support five year reviews to be performed by others.

SAIC MONTHLY REPORT

Contract Number:	GS-10F-0076J	Report Number:	1
Project No.:	Delivery Order W912QR-05-F-0033	Period:	April 2005
Contractor:	SAIC		
	8866 Commons Blvd. Suite 201, Twinsburg, OH 44087		
Location:	Ravenna Army Ammunition Plant, Ravenna, OH		
Project Name:	Six Environmental Areas of Concern		

SUMMARY OF ACTIVITIES:

HEALTH AND SAFETY PERFORMANCE:

PROBLEMS ENCOUNTERED/RESOLUTION:

PLANNED ACTIVITIES:

ACTIVITY AND PROGRESS COMPLETION TABLES:

Target/Milestone Activity	Scheduled Completion Date	Actual Completion Date	Status

CHANGES IN KEY PERSONNEL:

DEVIATION IN SCHEDULE (with explanation):

INVESTIGATIVE DERIVED WASTE (IDW):

REMARKS:

SAIC PROJECT MANAGER:

SIGNATURE:

**Percent Complete Estimates for Contract GS-10F-0076J
Performance Based Contract for Six Environmental Areas of Concern
at the Ravenna Army Ammunition Plant**

Task Number	Task Description	Percent Complete as of (date)
CLIN A.1a	Project Kick-off Meeting	
CLIN A.1b	Project Management Plan	
CLIN A.1c	Initial RAB Briefing	
CLIN A.1d	Schedule Updates and Bi-weekly Telecons	
CLIN A.1e	Monthly Progress Reports and Telecons	
CLIN A.2a	RI of Ramsdell Quarry Pond LF	
CLIN A.2b	RI of Erie Burning Grounds	
CLIN A.2c	RI of Open Demolition Area #2	
CLIN A.2d	RI of Load Line 12	
CLIN A.2e	RI of Fuze-Booster Quarry Pond LF	
CLIN A.2f	RI of Central Burning Pits	
CLIN B.FS	FSs of the subject AOCs	
CLIN B.PP	PPs of the subject AOCs	
CLIN B.ROD	RODs of the subject AOCs	
CLIN C.RD	Remedial Designs of subject AOCs	
CLIN D.RA	Remedial Actions w/ Close Out Reports for subject AOCs	
TOTAL TASK PERCENT COMPLETE		

Figure 5-1. RVAAP Monthly Progress Report Template

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6.0 PROJECT SCHEDULE AND MILESTONES

6.1 PROJECT SCHEDULE AND PROJECT DELIVERABLE MILESTONES

As part of this PMP, SAIC has developed and maintained a detailed project schedule that includes due dates for all major deliverables leading to completion of the entire project by the end of the current performance period (September 30, 2010). The project schedule details completion dates for milestones already achieved and target dates for future milestones. Generally, milestones are established for deliverables within the control of the contractor, U.S. Army, and Ohio EPA, and are critical to forward movement (i.e., Final versions of major deliverables). In addition, the detailed project schedule incorporates the following general requirements established in the PWS (USACE 2005a):

- Ohio EPA 45-day review period;
- Comment resolution meetings/teleconferences held within 15 days of close of comment period; and
- Deliverables to be provided within 30 days of receipt of Ohio EPA disapproval of previous version.

Table 6-1 and Figure 6-1 present a schedule showing the milestones achieved and the anticipated completion dates of milestones yet to be approved by both the Ohio EPA and the Army. Approval of the detailed project schedule and associated milestones will be obtained as part of the PMP review and approval cycle.

Table 6-1. Project Deliverable Milestone Schedule for Six Environmental AOCs at RVAAP

CLIN	Description	Completion Date / Remaining Deliverable Milestone
A	<i>Complete Project Management Plan and Remedial Investigations</i>	
A.1b	Project Management Plan	Revision 0 submitted 7/11/05.
A.2a	RQL Phase I RI Report	Final approved on 11/2/05.
A.2b	EBG Phase II RI Report	Final approved on 11/8/05.
A.2c	ODA2 Phase II RI Report	Final approved on 11/8/05.
A.2d	Revised Final LL12 Phase II RI Report	Final approved on 12/28/05.
A.2e	FBQ Phase I/Phase II RI Report	Final approved on 12/29/05.
A.2f	CBP RI Report	Final approved on 11/2/05.
B	<i>Complete Feasibility Studies, Proposed Plans, and Records of Decisions</i>	
B.FS(a)	RQL Feasibility Study	Final approved on 11/21/06.
B.FS(b)	EBG RI Addendum Recommending NFA	Final approved on 10/5/06.
B.FS(c)	ODA2 RI Addendum Recommending NFA	Final approved on 9/20/06.

Table 6-1. Project Deliverable Milestone Schedule for Six Environmental AOCs at RVAAP (continued)

CLIN	Description	Completion Date / Remaining Deliverable Milestone
B.FS(d)	LL12 Feasibility Study	Final approved on 8/29/06.
B.FS(e)	FBQ Feasibility Study	Final approved on 9/13/06.
B.FS(f)	CBP RI Addendum Recommending NFA	Final approved on 7/1/08.
B.PP(a)	RQL Proposed Plan	Final approved on 3/19/07.
B.PP(b)	EBG Proposed Plan	Final approved on 2/27/07.
B.PP(c)	ODA2 Proposed Plan	Final approved on 2/27/07.
B.PP(d)	LL12 Proposed Plan	Final approved on 3/19/07.
B.PP(e)	FBQ Proposed Plan	Final approved on 3/19/07.
B.PP(f)	CBP Proposed Plan	Final approved on 11/13/08.
B.ROD(a)	RQL Record of Decision	ROD signed on 10/13/09.
B.ROD(b)	EBG Record of Decision	ROD signed on 1/28/08.
B.ROD(c)	ODA2 Record of Decision	ROD signed on 1/28/08.
B.ROD(d)	LL12 Record of Decision	ROD signed on 10/13/09.
B.ROD(e)	FBQ Record of Decision	ROD signed on 1/28/08.
B.ROD(f)	CBP Record of Decision	ROD signed on 7/15/09.
C	<i>Complete Remedial Designs</i>	
C.RD(a)	RQL Remedial Design	Approval estimated on 2/10/10.
C.RD(b)	EBG Remedial Design	Task complete when ROD recommending NFA was signed.
C.RD(c)	ODA2 Remedial Design	Task complete when ROD recommending NFA was signed.
C.RD(d)	LL12 Remedial Design	Approval estimated on 11/12/09.
C.RD(e)	FBQ Remedial Design	Final approved on 7/31/09.
C.RD(f)	CBP Remedial Design	Task complete when ROD recommending NFA was signed.
D	<i>Complete Remedial Actions and Final Remedial Action Reports</i>	
D.RA(a)	RQL Remedial Action and Remedial Action Report	Implementation of RA estimated to start on 2/11/10. Completion of RAR estimated on 9/24/10.
D.RA(a)	EBG Remedial Action and Remedial Action Report	Task complete when ROD recommending NFA was signed.
D.RA(a)	ODA2 Remedial Action and Remedial Action Report	Task complete when ROD recommending NFA was signed.
D.RA(a)	LL12 Remedial Action and Remedial Action Report	Implementation of RA estimated to start on 11/13/09. Completion of RAR estimated on 9/8/10.

Table 6-1. Project Deliverable Milestone Schedule for Six Environmental AOCs at RVAAP (continued)

CLIN	Description	Completion Date / Remaining Deliverable Milestone
D.RA(a)	FBQ Remedial Action and Remedial Action Report	Remedial Activities started on 10/14/09. Completion of RAR estimated on 7/10/10.
D.RA(a)	CBP Remedial Action and Remedial Action Report	Task complete when ROD recommending NFA was signed.

The Project Manager will have primary responsibility for maintaining the project schedule throughout the contract performance period. The schedule will be updated biweekly to accurately reflect project progress and schedule changes. The updated schedule shall be included with the monthly project updates submitted to USACE on the fifth of every month. This schedule information also will be provided for integration into the overall RVAAP IRP schedule managed by the USACE Louisville District. SAIC will participate in the ongoing bi-weekly RVAAP IRP Program schedule review teleconferences.

In the event that a schedule milestone extension is required, SAIC will notify USACE (the responsible party). The U.S. Army will request an extension from Ohio EPA in accordance with the DFFO, by specifying:

1. The milestone that is sought to be extended;
2. The length of the extension requested;
3. The cause(s) for the extension; and
4. Any related milestones or target dates that would be affected if the extension request were granted.

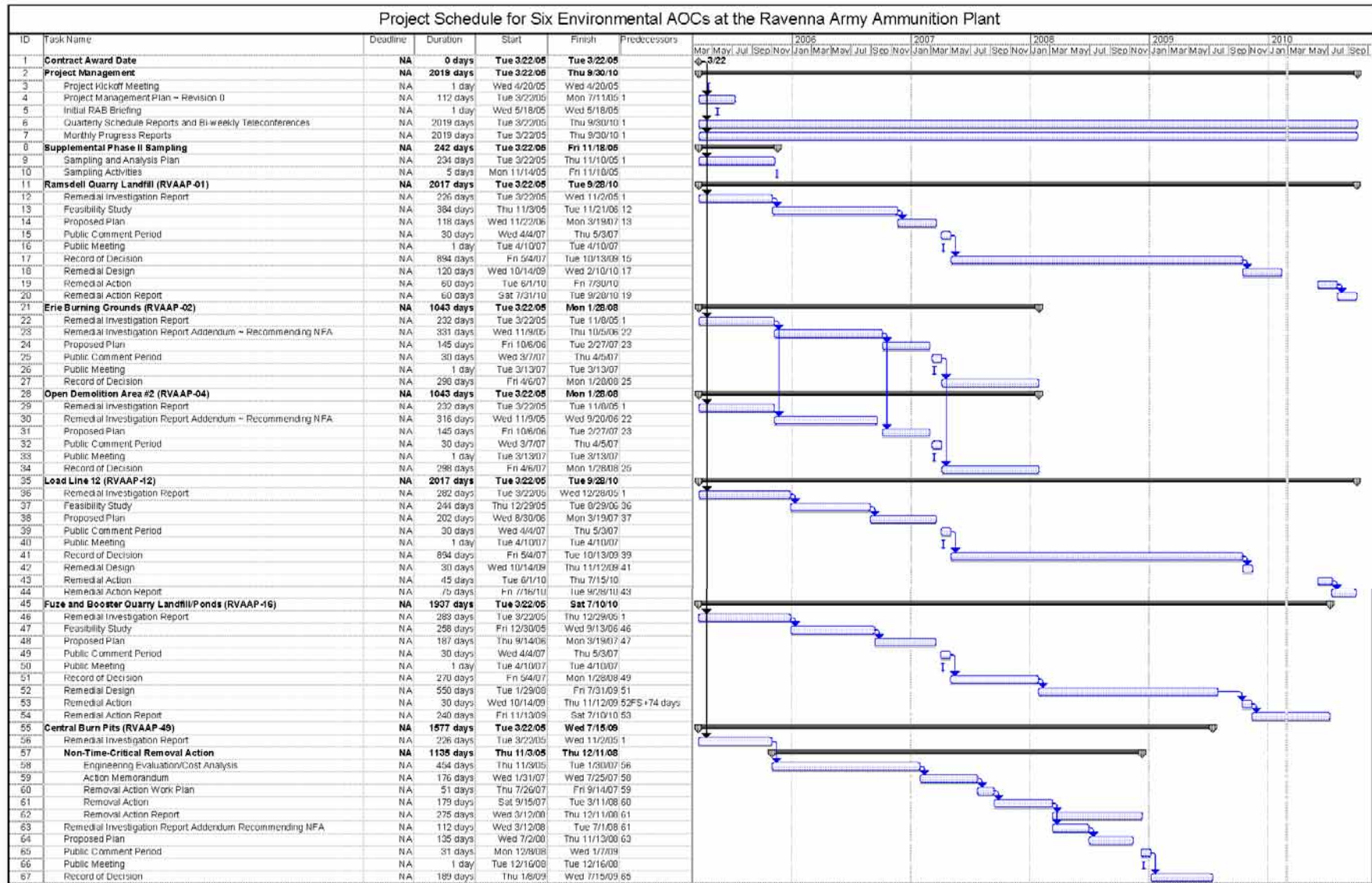


Figure 6-1. Project Schedule for Six Environmental AOCs at RVAAP

6.2 PROJECT PAYMENT MILESTONES

Payment of this PBA is dependant upon the completion of established project payment milestones (Table 6-2). Some milestones and sub-milestones may be eliminated or modified in response to how the work will actually be performed. In the event that a milestone is eliminated from this project, the associated payment will be made to SAIC upon the accomplishment of the activities that replaced the original milestone or sub-milestone in the sequence of actions leading to the accomplishment of environmental/regulatory closure of the six AOCs.

For purposes of milestone payment, milestone documentation shall be submitted to USACE in a timely manner by SAIC, reviewed by USACE, and SAIC shall be notified of the findings within 30 working days of delivery of the milestone documentation. The USACE COR and the SAIC Project Manager shall discuss and/or meet after receipt of the milestone documentation to:

- Formally review the quantity and quality of services;
- Inspect work milestone documentation for compliance with the PWS and project documentation; and
- Approve or disapprove the performance of the milestone.

Table 6-2. Project Payment Milestone Schedule for Six Environmental AOCs at RVAAP

CLIN	Description	Performance/Payment Milestone
<i>A</i>	<i>Project Management Activities and Complete RIs for 6 Environmental AOCs</i>	
A.1a	Project Kick-Off Meeting	100% payment after approval of meeting minutes.
A.1b	Project Management Plan (PMP)	100% payment after approval of Final PMP.
A.1c	Initial RAB Briefing	100% payment upon completion of initial RAB presentation.
A.1d	Quarterly Schedule Reports and Bi-Weekly Teleconference	Incremental payment at 10% following approval of reports (10 reports), 100% payment upon completion of contract base period.
A.1e	Monthly Progress Reports	Incremental monthly payment following approval of monthly report, 100% payment upon completion of contract base period.
A.2a	RQL Phase I RI	95% after submittal of Draft Phase I RI Report.
		100% payment after approval of Final Phase I RI Report.
A.2b	EBG Phase II RI	95% after submittal of EBG Draft Phase II RI Report.
		100% payment after approval of Final Phase II RI Report.
A.2c	ODA2 Phase II Final RI	95% after submittal of ODA2 Draft Phase II RI Report.
		100% payment after approval of Final Phase II RI Report.
A.2d	Revised Final LL12 Phase II RI	95% payment after submittal of rev. Final Phase II RI Report.
		100% payment after approval of Final Phase II RI Report.
A.2e	FBQ RI	95% payment after submittal of Final Phase II RI Report.
		100% payment after approval of Final Phase II RI Report.
A.2f	CBP RI	95% payment after submittal of Final Phase II RI Report.
		100% payment after approval of Final Phase II RI Report.

Table 6-2. Project Payment Milestone Schedule for Six Environmental AOCs at RVAAP (continued)

CLIN	Description	Performance/Payment Milestone
B	Complete FS/PP/ROD for 6 Environmental AOCs	
B.FS(a)	RQL Feasibility Study	95% payment after submittal of Draft FS.
		100% payment after approval of Final FS.
B.FS(b)	EBG Feasibility Study	95% payment after submittal of Draft FS.
		100% payment after approval of Final FS.
B.FS(c)	ODA2 Feasibility Study	95% payment after submittal of Draft FS.
		100% payment after approval of Final FS.
B.FS(d)	LL12 Feasibility Study	95% payment after submittal of Draft FS.
		100% payment after approval of Final FS.
B.FS(e)	FBQ Feasibility Study	95% payment after submittal of Draft FS.
		100% payment after approval of Final FS.
B.FS(f)	CBP Feasibility Study	95% payment after submittal of Draft FS.
		100% payment after approval of Final FS.
B.PP(a)	RQL Proposed Plan	95% payment after submittal of Draft PP.
		100% payment after approval of Final PP.
B.PP(b)	EBG Proposed Plan	95% payment after submittal of Draft PP.
		100% payment after approval of Final PP.
B.PP(c)	ODA2 Proposed Plan	95% payment after submittal of Draft PP.
		100% payment after approval of Final PP.
B.PP(d)	LL12 Proposed Plan	95% payment after submittal of Draft PP.
		100% payment after approval of Final PP.
B.PP(e)	FBQ Proposed Plan	95% payment after submittal of Draft PP.
		100% payment after approval of Final PP.
B.PP(f)	CBP Proposed Plan	95% payment after submittal of Draft PP.
		100% payment after approval of Final PP.
B.ROD(a)	RQL Record of Decision	95% payment after submittal of Draft ROD.
		100% payment after approval of Final ROD.
B.ROD(b)	EBG Record of Decision	95% payment after submittal of Draft ROD.
		100% payment after approval of Final ROD.
B.ROD(c)	ODA2 Record of Decision	95% payment after submittal of Draft ROD.
		100% payment after approval of Final ROD.
B.ROD(d)	LL12 Record of Decision	95% payment after submittal of Draft ROD.
		100% payment after approval of Final ROD.
B.ROD(e)	FBQ Record of Decision	95% payment after submittal of Draft ROD.
		100% payment after approval of Final ROD.
B.ROD(f)	CBP Record of Decision	95% payment after submittal of Draft ROD.
		100% payment after approval of Final ROD.
C	Complete RD for 6 Environmental AOCs	
C.RD(a)	RQL Final RD	100% payment upon approval of Final RD.
C.RD(b)	EBG Final RD	100% payment upon approval of Final RD.
C.RD(c)	ODA2 Final RD	100% payment upon approval of Final RD.

Table 6-2. Project Payment Milestone Schedule for Six Environmental AOCs at RVAAP (continued)

CLIN	Description	Performance/Payment Milestone
C.RD(d)	LL12 Final RD	100% payment upon approval of Final RD.
C.RD(e)	FBQ Final RD	100% payment upon approval of Final RD.
C.RD(f) ¹	CBP Final RD	60.1% payment upon submittal of Draft EE/CA.
		3.2% payment upon approval of Final EE/CA.
		17.7% payment upon approval of Final Action Memorandum.
		19.0% payment upon approval of Final Removal Action Work Plan.
D	Complete RA and Final Remedial Action Report (RAR) for 6 Environmental AOCs	
D.RA(a)	RQL RA and Final RAR	100% payment after approval of Final RAR.
D.RA(b)	EBG RA and Final RAR	100% payment after approval of Final RAR.
D.RA(c)	ODA2 RA and Final RAR	100% payment after approval of Final RAR.
D.RA(d)	LL12 RA and Final RAR	100% payment after approval of Final RAR.
D.RA(e)	FBQ RA and Final RAR	100% payment after approval of Final RAR.
D.RA(f) ¹	CBP RA and Final RAR	100% payment after approval of Final Removal Action Report for Non-Time Critical Removal Action.

¹ Milestone payment was adjusted in Contract Modification No. P00001.

6.3 SCHEDULE ADJUSTMENT ACTIONS

Table 6-3 presents the contractual items and schedule extensions that have taken place since the contract award date.

Table 6-3. Contractual Items and Schedule Extensions

<i>Modification Number</i>	<i>Date</i>	<i>Description</i>
P00001	April 12, 2007	Revision of payment milestones for the Central Burn Pits Contract Line Items. Revisions were necessary because actions took place as a Non-Time Critical Removal Action.
P00002	September 10, 2007	Period of Performance Extension to February 28, 2009 due to the extended schedule necessary to complete the Non-Time Critical Removal Action at the Central Burn Pits.
P00003	February 23, 2009	Period of Performance extension to April 30, 2009 due to ongoing Universal Environmental Covenant Agreement negotiations with the U.S. Army and Ohio EPA.
P00004	April 23, 2009	Period of Performance extension to May 31, 2009 due to ongoing Universal Environmental Covenant Agreement negotiations with the U.S. Army and Ohio EPA.
P00005	May 27, 2009	Period of Performance extension to August 31, 2009 due to ongoing Universal Environmental Covenant Agreement negotiations with the U.S. Army and Ohio EPA.
P00006	August 5, 2009	Period of Performance extension to September 30, 2010 due to ongoing Universal Environmental Covenant Agreement negotiations with the U.S. Army and Ohio EPA.

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7.0 REFERENCES

- Ohio Environmental Protection Agency (Ohio EPA) 2004. *Director's Final Findings and Orders in the Matter of United States Department of the Army, Ravenna Army Ammunitions Plant*. June 2004.
- Portage Environmental 2004. *Facility Wide Groundwater Monitoring Program Plan*. September 2004.
- United States Army Corps of Engineers (USACE) 2001a. *Facility Wide Safety and Health Plan for Environmental Investigations at the Ravenna Army Ammunitions Plant, Ravenna, Ohio*. March 2001.
- USACE 2001b. *Facility-Wide Sampling and Analysis Plan for Environmental Investigations at the Ravenna Army Ammunition Plant, Ravenna, Ohio*. March 2001.
- USACE 2002. *Louisville Chemistry Guideline, Version 5*. June 2002.
- USACE 2003a. *RVAAP Facility Wide Ecological Risk Work Plan*. April 2003.
- USACE 2003b. *Community Relations Plan for the Ravenna Army Ammunition Plant*. September 2003.
- USACE 2004. *Ravenna Army Ammunition Plant Facility Wide Human Health Risk Assessor Manual*. January 2004.
- USACE 2005a. *Performance Work Statement for Performance Based Contract of Six Areas of Concern at the Ravenna Army Ammunition Plant*. February 10, 2005.
- USACE 2005b. *Phase I/Phase II Remedial Investigation of the Fuze and Booster Quarry Landfill/Ponds (RVAAP-16) at the Ravenna Army Ammunition Plant*. November 2005.
- USACE 2005c. *Project Management Plan Performance Based Contract for Six Environmental Areas of Concern at Ravenna Army Ammunitions Plant, Revision 0*. July 11, 2005.
- USACE 2005d. *Sampling and Analysis Plan Addendum No. 1 Supplemental Phase II Remedial Investigation for Open Demolition Area #2 (RVAAP-02), Fuze and Booster Quarry Landfill/Ponds (RVAAP-16), and Central Burn Pits (RVAAP-49) at the Ravenna Army Ammunition Plant*. November 2005.
- USACE 2007a. *Engineering Evaluation/Cost Analysis for Central Burn Pits at Ravenna Army Ammunition Plant in Ravenna, Ohio*. January 2007.

USACE 2007b. *Action Memorandum for Central Burn Pits at Ravenna Army Ammunition Plant in Ravenna, Ohio*. June 2007.

USACE 2007c. *Removal Action Work Plan for the Central Burn Pits at Ravenna Army Ammunition Plant in Ravenna, Ohio*. September 2007.

United States Environmental Protection Agency (USEPA) 2000. *Use of Non-Time Critical Removal Authority in Superfund Response Actions*. February 2000.

Vista Sciences Corporation (Vista) 2009. *Ravenna Army Ammunition Plant Submission Format Guidelines, Version 18.0*. December 2009.

**DRAFT PROJECT MANAGEMENT PLAN VERSION 1.0
RAVENNA ARMY AMMUNITION PLANT, RAVENNA OHIO
REVISED COMMENT RESPONSE TABLE
February 17, 2010**

Comment Number	Page or Sheet & Line No.	New Page or Sheet	Comment	Recommendation	Response
<i>USACE - Louisville (Thomas M. Chanda)</i>					
A-1	General Comment	N/A	It would have been a great advantage to the reviewer knowing what sections were modified from the original PBC05 submittal; this and for future reviewers	I, for one, would greatly appreciate to see an errata sheet installed at the beginning of the document.	Clarification. An errata sheet may not be appropriate as Revision 1.0 of the PMP is not correcting errors in Revision 0. However, to present changes in the document, the text at the end of this table has been added to the end of Section 1.1.
A-2	Page 1-4 Line 30	Pg 1-5	“MEC Scrap” – which would be redundant to MEC (Line 29) – Is this supposed to reference MEC Debris (MD)?	Please comment	Agree. “MEC scrap” will be replaced with “MEC debris”.
A-3	Page 2-2 Table 2-1	N/A	It would be more up to date to reference current land use designations rather than referencing the 2004 FW HH Risk Assessment Manual. Due to several subject stakeholders’ roundtable discussions, the reviewer is not completely certain “Land Use” classification f/ LL12, FBQ, & CBP confirm with OHARNG’s projections are current.	Please confirm with OHARNG that the Table’s Land Use designations are still correct/viable	Clarification. The land uses are presented in the PMP as they were stated in the contract Performance Work Statement and as agreed to in the Current and Potential Future Land Uses in the signed records of decisions. The land uses for LL12, FBQ, and CBP are correctly stated in Table 2-1. No text changes proposed.

**DRAFT PROJECT MANAGEMENT PLAN VERSION 1.0
RAVENNA ARMY AMMUNITION PLANT, RAVENNA OHIO
REVISED COMMENT RESPONSE TABLE
February 17, 2010**

Comment Number	Page or Sheet & Line No.	New Page or Sheet	Comment	Recommendation	Response
A-4	2-4 Line 13	N/A	Author references several times “Non-TCRA”, is not the correct CERCLA term “interim RA”	May be a matter of semantics on this terminology but, recommend conferring with OHEPA to determine the relativity of the two terms.	Clarification. SAIC followed the CERCLA process for a non-time critical removal action, which requires the completion of an EE/CA, an Administrative Record file, and community involvement. No text changes proposed.
A-5	2-9 Line 29	Pg 2-9	For the PMP record, state the specific “off-site treatment” that was employed. The reviewer presumed the excavated piles were simply disposed at a permitted landfill; this correct or incorrect?	Please clarify	Agree. Lines 32- 34 will be revised as follows: “Implementation of the removal action work plan began in October 2007. Removal activities continued until March 2008, when soil sample analyses confirmed the removal action cleanup goals were achieved. Non-hazardous soil was disposed at the American Landfill in Waynesburg, Ohio. The characteristically hazardous soil was hauled off-site to Lambton (Sarnia) Landfill in Ontario, Canada. There, the soil was treated to meet land disposal restrictions and disposed at the landfill. Table 2-3 presents the removal totals from Piles M and N.”
A-6	3-1 Line 26	Pg 3-1	To maintain the specificity/autonomy to the PBC05 contractual parameters, please change reference from “..these environmental AOCs...” to “.....the six environmental AOCs)		Agree. The text will be revised as follows: “All work performed at these six environmental AOCs.....”

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A-7	3-2 Lines 24 & 42	Pg 3-2	“Tiered” is an atypical term in this circumstance;	Can we change to something more applicable; e.g. “.....was prepared to comply with the RVAAP FW SAP ...”; “.....was prepared to model the RVAAP FW SAP...”; or “....was to augment site specifics in conjunction with the RVAAP FW SAP...”	Agree. The text on Line 24 will be revised as follows: “The SAP was tiered prepared under the existing standards of performance outlined in RVAAP Facility-Wide SAP (USACE 2001b) and.....” The text on Line 42 will be revised as follows: “...task of the project (e.g., implementation of the RDs) which will be tiered prepared under the Facility-Wide Health and Safety Plan.”
A-8	4-1 & 4-2	Pg 4-2	The reviewer does not see any reference to the presence or requirement for a certified UXO; presuming this has been typical SOP throughout the process of executing the PBC05	Please explain for not mentioning this site QA surveillance.	Agree. The text will be revised on page 4-2 lines 16-19 as follows: “SAIC will implement this project using subcontractor arrangements with remedial action subcontractor, as well as any necessary drilling, laboratory, MEC Avoidance, and transportation and disposal subcontractors. “
A-9	4-2 Line 34 Bullets	N/A	Is not RVAAP & BRAC-D a synonymous entity; if not, explain the differentiation? Note too, it is presumed the RVAAP Restoration Advisory Board (RAB) is one of those formally recognized “RVAAP Interested Parties ” but, no mentioned is made. SAIC has briefed this the RAB on several occasions concerning its involvement with the RVAAP IRP work.	Please address accordingly.	Clarification. In context of the PMP text, RVAAP refers to the installation, inclusive of operations and management, security, administrative records, etc. Given that BRAC-D is the command organization, it is not a synonymous entity with RVAAP. No text changes proposed.

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<i>Ohio EPA - (Todd R. Fisher)</i>					
O-1	Page 2-7 /2-8 Table 2.2	N/A	Completion dates are missing for many of the reports/documents.	Please supply dates of completion for RI, FS, PP, RODs, RD/RAs, and RARs.	Clarification. Completion dates/approvals for the various reports are presented in Table 6-1. No text change recommended
O-2	Page 3-3 Lines 9 – 22	Pg 3-3	SSHP should include map and directions to nearest hospital.	Please add “Map and directions to nearest hospital” to the bulleted list.	Agree. “Map and driving directions to the nearest hospital” will be inserted after line 19.
O-3	Page 4-3, Table 4-1	N/A	This table indicates that Ohio EPA only provides comment on PMPs and not approvals	Please clarify whether or not Ohio EPA provides approval for PMPs (and subsequent revisions).	Clarification. Ohio EPA reviews and comments on the PMP, but does not provide formal approval.

Text updates per comment A-1.

This PMP is considered a living document and will be updated, if necessary, after completion of major deliverable milestones to address significant changes to the overall technical and/or management approach. Updates to the PMP shall be noted as Revisions and sequentially numbered. The initial version of the PMP (dated July 2005) was designated as Revision 0. This update is Revision 1. **The following bullets present changes made to the PMP:**

- This PMP was updated to be compliant with the Ravenna Army Ammunition Plant Submission Format Guidelines, Version 18.0 (Vista 2009).
- The General Facility Description and AOC Operational History/Description was moved to Section 1.0 and, consequently, all other section moved up one section.
- The General Facility Description was changed per the standard language provided by Ohio Army National Guard (OHARNG) in May 2006.
- A summary of the current status of the project CERCLA actions was added to Section 2.2 as well as updated in Table 2-2.
- A discussion of the Non-Time Critical Removal Action (Non-TCRA) at CBP was added in Section 2.2.2.
- Permitting and notifications were added as part of the project execution in Section 3.1.
- The project organization, roles, and responsibilities were updated in Section 4.0.
- Table 6-1 and Figure 6-1 was updated to reflect current status of the project deliverable milestone schedule.
- A table presenting the contractual items and schedule extensions to date has been added to Section 6.