

# REPORT DOCUMENTATION PAGE

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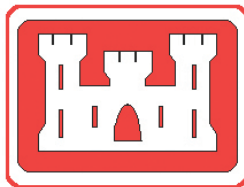
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<b>14. ABSTRACT</b> The Project Management Plan (PMP) describes ECC's activities to be performed for this task order and meeting the requirements of the Performance Work Statement dated May 3, 2011. This PMP presents the project team roles and responsibilities, an organizational chart, required deliverables, and addresses coordination with RVAAP stakeholders, as well as other facility environmental and operational activities.					
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**Final  
Project Management Plan**

**2011 PBA Environmental Investigation and Remediation  
at 14 Compliance Restoration Sites  
Revision 0  
Ravenna Army Ammunition Plant  
Ravenna, Ohio**

**Contract No.: W912QR-04-D-0039  
Delivery Order: 0004**

**Prepared for:**



**U.S. Army Corps of Engineers, Louisville District  
600 Dr. Martin Luther King Jr. Place  
Louisville, Kentucky 40202-2267**

**Prepared by:**



**ECC  
33 Boston Post Road West  
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Marlborough, MA 01752**

**January 27, 2012**

**DOCUMENT DISTRIBUTION**  
**for the**  
**Final Project Management Plan**  
**2011 PBA Environmental Investigation and Remediation**  
**at 14 Compliance Restoration Sites**  
**Revision 0**  
**Ravenna Army Ammunition Plant**  
**Ravenna, Ohio**

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

NGB = National Guard Bureau

OHARNG = Ohio Army National Guard

RVAAP = Ravenna Army Ammunition Plant

USACE = United States Army Corps of Engineers

REIMS = Ravenna Environmental Information Management System

ECC = Environmental Chemical Corporation

## CONTRACTOR'S STATEMENT OF INDEPENDENT TECHNICAL REVIEW

ECC has completed the *Final Project Management Plan for the Environmental Investigation and Remediation at 14 Compliance Restoration Sites at Ravenna Army Ammunition Plant, Ravenna, Ohio*. Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in this project. During the independent technical review, compliance with established policy principals and procedures, utilizing justified and valid assumptions was verified. This included review of data quality objectives; technical assumptions, methods, procedures, and materials 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 the law and existing United States Corps of Engineers policy.



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Debra MacDonald, PMP  
Project Manager

January 27, 2012

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Date



Curt Varner, P.E. for

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Willard Murray, Ph.D., P.E.  
Senior Engineer

January 27, 2012

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Date

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## ACRONYMS AND ABBREVIATIONS

ACM	Asbestos Containing Material
AEDB-R	Army Environmental Database-Restoration Module
AOC	Area of Concern
APP	Accident Prevention Plan
ASSHP	Abbreviated Site Safety and Health Plan
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
bgs	below ground surface
BRACD	Base Realignment and Closure Division
C	Central
CAS	Chemical Abstracts Services
CERCLA	Comprehensive Environmental, Response, Compensation, and Liability Act
CIH	Certified Industrial Hygienist
CLIN	Contract Line Item Number
CR	Compliance Restoration
COR	Contracting Officer Representative
CRF	Central Records Facility
CSDGM	Content Standard for Digital Geospatial Metadata
CSP	Certified Safety Professional
CWM	Chemical Warfare Material
DDESB	Department of Defense Explosives Safety Board
DERP	Defense Environmental Restoration Program
DERR	Division of Emergency and Remedial Response
DFFO	Director's Final Findings and Orders
DLA	Defense Logistics Agency
DoD	Department of Defense
DQO	Data Quality Objective
EC	Electronic copy
EDD	Electronic Data Deliverable
EM	Engineering Manual
EPA	Environmental Protection Agency
ERIS	Environmental Restoration Information System
FAR	Federal Acquisition Regulations
FGDC	Federal Geographic Data Committee
FWSHP	Facility-Wide Safety and Health Plan
GIS	Geographic Information System
GPS	Global Positioning System
HC	Hard copy
HRR	Historical Records Review
HTRW	Hazardous, Toxic, and Radioactive Waste
IAP	Installation Action Plan
IRP	Installation Restoration Program

## ACRONYMS AND ABBREVIATIONS (CONTINUED)

IMCOM	Installation Management Command
km	Kilometer
LL #2	Load Line 2
LL #6	Load Line 6
LL #12	Load Line 12
LCG	Louisville Chemistry Guideline
MC	Munitions Constituent
MD	Munitions Debris
MEC	Munitions and Explosives of Concern
MR	Munitions Response
MRS	Munitions Response Site
N	North
NCP	National Contingency Plan
NE	Northeast
NEDO	Northeast District Office
NELAC	National Environmental Laboratory Accreditation Conference
NELAP	National Environmental Laboratory Accreditation Program
NGA	National Geospatial-Intelligence Agency
NGB	National Guard Bureau
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NSSDA	National Standard for Spatial Data Accuracy
OFFO	Office of Federal Facilities Oversight
OHARNG	Ohio Army National Guard
Ohio EPA	Ohio Environmental Protection Agency
PBA	Performance-Based Acquisition
PE	Professional Engineer
PG	Professional Geologist
PH	Powerhouse
PM	Project Manager
PMP	Project Management Plan
POC	Point of Contract
PPE	Personal Protective Equipment
PWS	Performance Work Statement
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QSM	Quality Systems Manual
RAB	Restoration Advisory Board
REIMS	RVAAP Environmental Information Management System
RI	Remedial Investigation
RIP	Remedy In Place



## ACRONYMS AND ABBREVIATIONS (CONTINUED)

ROE	Right of Entry
RR	Railroad
RRD	Range-Related Debris
RVAAP	Ravenna Army Ammunition Plant
S	South
SARA	Superfund Amendments and Reauthorization Act
SDSFIE	Spatial Data Standards for Facilities, Infrastructure, and Environment
SI	Site Inspection
SOW	Scope of Work
SRC	Site Related Constituents
SS	South Service
SSHP	Site Safety and Health Plan
TM	Task Manager
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAEC	United States Army Environmental Command
USATCES	United States Army Technical Center for Explosive Safety
UST	Underground Storage Tank
UTM	Universal Transverse Mercator
UXO	Unexploded Ordnance
WGS	World Geodetic System
WW	Waterworks

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## **EXECUTIVE SUMMARY**

The Project Management Plan (PMP) presents the management plan for ECC's task order under Contract Number W912QR-04-D-0039, Delivery Order Number 0004 for the U.S Army Corps of Engineers (USACE), Louisville District. In accordance with the Performance Work Statement (PWS) dated May 3, 2011 for this Performance-Based Acquisition (PBA), firm fixed price task order, ECC is tasked with executing environmental investigations and remediation activities at 14 Compliance Restoration (CR) sites at the Ravenna Army Ammunition Plant (RVAAP) in Ravenna, Ohio. This Project Management Plan presents the team organization, statement of work, coordination details, deliverables, quality, schedule, site logistics and record management for this task order for the following CR sites at RVAAP:

- CC-RVAAP-68 Electric Substations (East, West, No. 3);
- CC-RVAAP-69 Building 1048 Fire Station;
- CC-RVAAP-70 East Classification Yard;
- CC-RVAAP-71 Barn No. 5 Petroleum Release;
- CC-RVAAP-72 Facility-Wide Underground Storage Tanks;
- CC-RVAAP-73 Facility-Wide Coal Storage;
- CC-RVAAP-74 Building 1034 - Motor Pool Hydraulic Lift;
- CC-RVAAP-75 George Road Sewage Treatment Plant;
- CC-RVAAP-76 Depot Area;
- CC-RVAAP-77 Building 1037 - Laundry Waste Water Sump;
- CC-RVAAP-78 Quarry Pond Surface Dump;
- CC-RVAAP-79 DLA Ore Storage Sites – Remaining Ore Sites;
- CC-RVAAP-80 Group 2 Propellant Can Tops; and
- CC-RVAAP-83 Former Buildings 1031 and 1039.

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## **1.0 INTRODUCTION**

ECC is submitting this Draft Project Management Plan (PMP) to the U.S. Army in accordance with the Performance Work Statement (PWS), Contract No. W912QR-04-D-0039, Task Order 0004 for performance-based, firm fixed-price environmental services at 14 Compliance Restoration (CR) Sites at the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio. The Delivery Order was issued by the United States Army Corps of Engineers, Louisville District on August 15, 2011.

### **1.1 Installation Setting and Status**

The RVAAP (Federal Facility Identification number: OH213820736) is located in northeastern Ohio within Portage and Trumbull Counties, approximately 3 miles east-northeast of the city of Ravenna (Figure 1-1). The installation is approximately 11 miles long and 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 Installation is surrounded by several communities: Windham on the north, Garrettsville 6 miles to the northwest, Newton Falls 1 mile to the southeast, Charlestown to the southwest, and Wayland 3 miles to the south.

As of February 2006, administrative control of 20,403 acres of the former 21,683 acre RVAAP have been transferred to the National Guard Bureau (NGB) and subsequently licensed to the Ohio Army National Guard (OHARNG) for use as a military training site. Currently, RVAAP consists of 1,280 acres in several distinct parcels scattered throughout the confines of the Camp Ravenna Joint Military Training Center (Camp Ravenna). These 1,280 acres consist of former industrial facilities that are being remediated and managed by the Base Realignment and Closure Division (BRACD).

During the operational years, prior to Camp Ravenna, the entire 21,683- acre property was a government-owned, contractor-operated industrial facility. The RVAAP CR Sites encompass investigation and remediation of past activities over the entire 21,683 acres of the former RVAAP; therefore, references to the RVAAP in this PMP are considered to be inclusive of the historical extent of the RVAAP, which is inclusive of the combined acreages of the current Camp Ravenna and RVAAP, unless otherwise specifically stated.

RVAAP is bound to the Director's Final Findings and Orders (DFFOs) issued June 10, 2004 by the Ohio Environmental Protection Agency (Ohio EPA) pursuant to the authority vested under Chapters 3734, 3745, and 6111 of the Ohio Revised Code (ORC). The objective of the Orders is to ensure that the public health, safety, and welfare, as well as the environment, is protected from the disposal, discharge, or release of contaminants. RVAAP is not on the USEPA National Priorities List (NPL), although it is in the USEPA Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database. The Ohio EPA is the lead environmental regulator at the RVAAP. The installation is bound to the DFFOs, issued on

June 10, 2004 by the Ohio EPA. The DFFOs form the basis for the implementation of a CERCLA based environmental remediation program at the installation.

## 1.2 Scope of Work

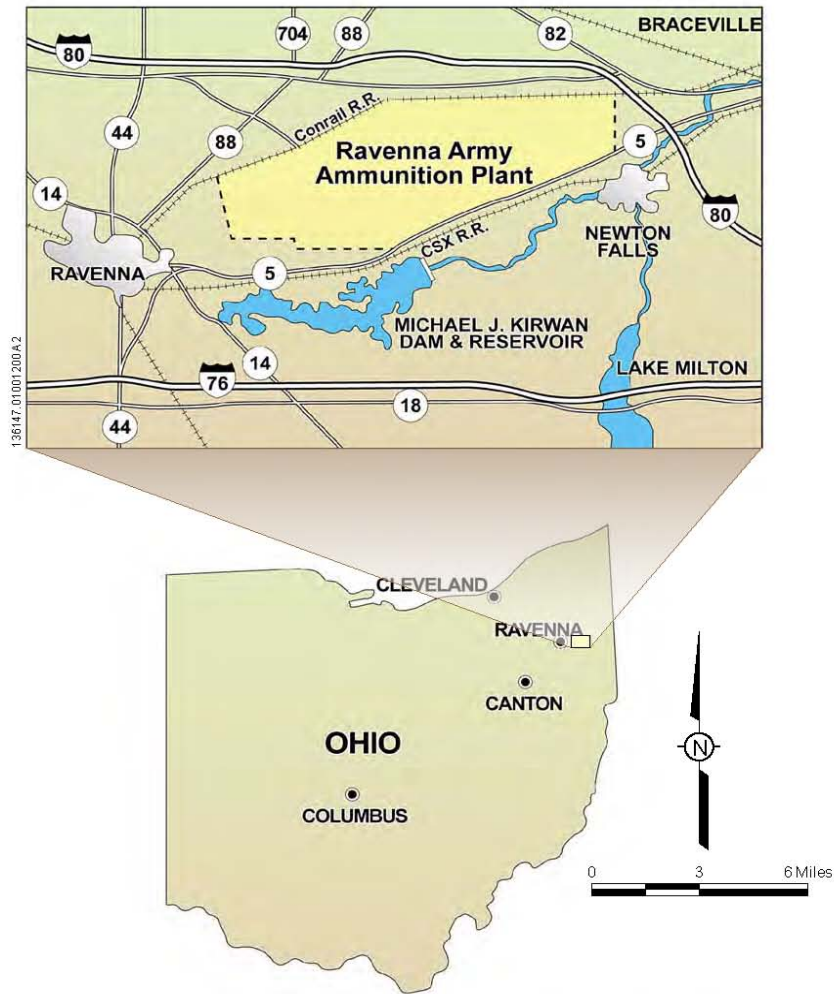
Under this Delivery Order, ECC will perform environmental investigation and remediation activities at the 14 CR Sites listed in the PWS dated May 3, 2011. This PMP describes ECC's approach to executing this project and meeting the requirements of the PWS. This PMP includes a discussion of project team roles and responsibilities, an organizational chart, deliverable matrix, and addresses coordination with RVAAP stakeholders, as well as other facility environmental and operational activities. This PMP will be updated as necessary throughout the remainder of the contract. Updates to the PMP shall be noted as Revisions and numbered sequentially. The approved PMP will initially be designated as Revision 0.

This PMP is applicable to all environmental investigation and remedial activities to be conducted by ECC and ECC subcontractors for the 14 CR sites identified in the PWS. All references to managers, organizations, and processes in this document are intended to refer to ECC's management team, organization, and processes, unless otherwise specified. The locations of the 14 CR sites are provided on Figure 1-2, and are listed as follows:

- CC-RVAAP-68 Electric Substations (East, West, No. 3);
- CC-RVAAP-69 Building 1048 Fire Station;
- CC-RVAAP-70 East Classification Yard;
- CC-RVAAP-71 Barn No. 5 Petroleum Release;
- CC-RVAAP-72 Facility-Wide Underground Storage Tanks;
- CC-RVAAP-73 Facility-Wide Coal Storage;
- CC-RVAAP-74 Building 1034 - Motor Pool Hydraulic Lift;
- CC-RVAAP-75 George Road Sewage Treatment Plant;
- CC-RVAAP-76 Depot Area;
- CC-RVAAP-77 Building 1037 - Laundry Waste Water Sump;
- CC-RVAAP-78 Quarry Pond Surface Dump;
- CC-RVAAP-79 DLA Ore Storage Sites – Remaining Ore Sites;
- CC-RVAAP-80 Group 2 Propellant Can Tops; and
- CC-RVAAP-83 Former Buildings 1031 and 1039.

The work to be completed under the PWS shall comply with all applicable Federal, State, and local rules, laws, and regulations in order to successfully complete all performance objectives in a manner that is consistent with any applicable orders and permits, all previously agreed-upon and future cleanup agreements, guidance for the RVAAP BRAC program, and relevant Department of Defense (DOD) and Army policies, for the duration of this Delivery Order. All environmental services will comply with CERCLA, the Superfund Amendments and Reauthorization Act (SARA), and the National Oil and Hazardous Substances Contingency Plan (NCP) in coordination with the Ohio EPA and the United States Environmental Protection Agency (USEPA), Region 5, requirements as applicable.

**Figure 1-1 Location Map – Ravenna Army Ammunition Plant**

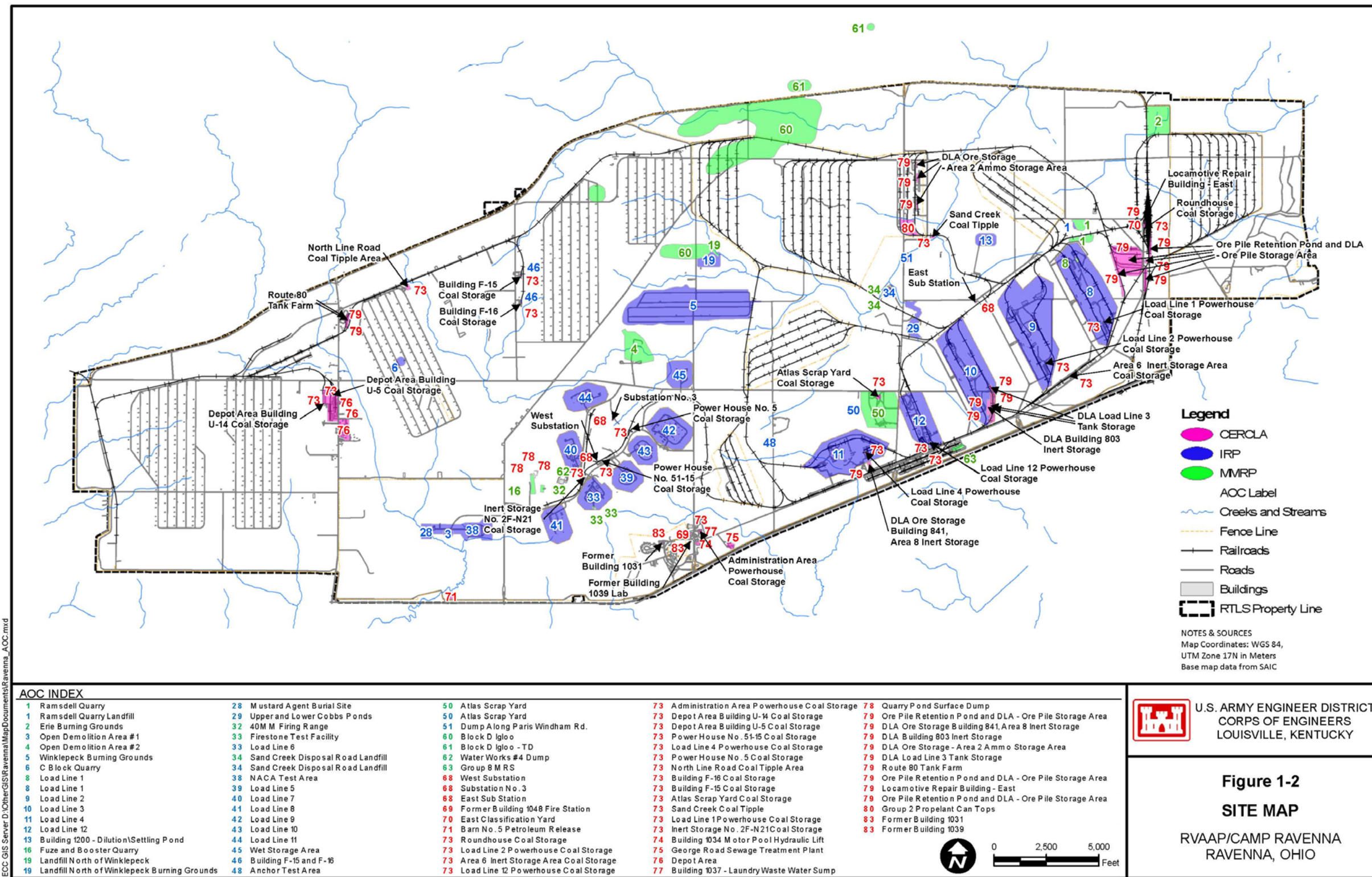


**Figure 1-1  
Location Map  
Ravenna Army Ammunition Plant  
Ravenna, Ohio**

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Figure 1-2 Site Map – RVAAP/Camp Ravenna



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### 1.3 Performance Objectives

ECC will furnish all labor, materials, and equipment necessary to meet the performance objectives and standards identified in Table 1-1.

**Table 1-1 Performance Objectives and Standards**

Performance Objectives	Performance Standards
<p>Achieve Approved Project Management Plan (PMP) and Quality Assurance Surveillance Plan (QASP) within 6 months of Notice to Proceed:</p> <ul style="list-style-type: none"> <li>- Draft PMP submittal within 30 calendar days of contract award</li> <li>- Final PMP submittal within 30 calendar days of receipt of COR/Ohio EPA comments on the draft</li> <li>- Draft QASP submittal within 30 calendar days of contract award</li> </ul>	<p>Army approval through the Contracting Officer's Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming Final PMP approval).</p> <p>Army approval through the Contracting Officer's Representative (COR).</p>
<p>Achieve an approved Historical Records Review for the following sites by 30 July 2012:</p> <p>CC-RVAAP-71 Barn No. 5 Petroleum Release  CC-RVAAP-83 Former Buildings 1031 and 1039</p>	<p>Army approval through the Contracting Officer's Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming Final Historical Records Review Report approval).</p>
<p><b>Option:</b>  Achieve an approved Site Inspection (SI) at the following site by 30 July 2013:</p> <p>CC-RVAAP-71 Barn No. 5 Petroleum Release</p>	<p>Army approval through the Contracting Officer's Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming Final SI Report approval).</p>
<p><b>Option:</b>  Achieve an approved Site Inspection (SI) at the following site by 30 July 2013:</p> <p>CC-RVAAP-83 Former Buildings 1031 and 1039</p>	<p>Army approval through the Contracting Officer's Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming Final SI Report approval).</p>
<p>Achieve an approved Site Inspection (SI) at the following sites by 30 July 2013:</p> <p>CC-RVAAP-70 East Classification Yard  CC-RVAAP-72 Facility-Wide Underground Storage Tanks  CC-RVAAP-75 George Road Sewage Treatment Plant  CC-RVAAP-77 Building 1037-Laundry Waste Water Sump</p>	<p>Army approval through the Contracting Officer's Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming SI approvals).</p>

Performance Objectives	Performance Standards
<p>Achieve an approved Remedial Investigation (RI) for all media, except groundwater, at the following site by 30 May 2014:</p> <p>CC-RVAAP-79 DLA Ore Storage Site – Main Ore Storage Yard</p>	<p>Army approval through the Contracting Officer’s Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming RI approval).</p>
<p>Achieve an approved Feasibility Study (FS) for all media, except groundwater, at the following site by 30 June 2014:</p> <p>CC-RVAAP-76 Depot Area</p>	<p>Army approval through the Contracting Officer’s Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming FS approval).</p>
<p>Achieve an approved Remedial Investigation (RI) for all media, except groundwater, at the following sites by 30 July 2015:</p> <p>CC-RVAAP-68 Electric Substations (East, West, No.3)  CC-RVAAP-69 Building 1048-Fire Station  CC-RVAAP-73 Facility-Wide Coal Storage  CC-RVAAP-74 Building 1034-Motor Pool Hydraulic Lift  CC-RVAAP-78 Quarry Pond Surface Dump  CC-RVAAP-79 DLA Ore Storage Sites-Remaining Ore Sites</p>	<p>Army approval through the Contracting Officer’s Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming RI approvals).</p>
<p><b>Option:</b>  Achieve an approved Remedial Investigation (RI) for all media, except groundwater, at CC-RVAAP-70 East Classification Yard by 1 August 2015.</p>	<p>Army approval through the Contracting Officer’s Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming RI approval).</p>
<p><b>Option:</b>  Achieve an approved RI for all media, except groundwater, at CC-RVAAP-71 Barn No. 5 Petroleum Release by 1 August 2015.</p>	<p>Army approval through the Contracting Officer’s Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming RI approval).</p>
<p><b>Option:</b>  Achieve an approved RI for all media, except groundwater, at CC-RVAAP-72 Facility-Wide Underground Storage Tanks by 1 August 2015.</p>	<p>Army approval through the Contracting Officer’s Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming RI approval).</p>
<p><b>Option:</b>  Achieve an approved RI for all media, except groundwater, at CC-RVAAP-75 (George Road Sewage Treatment Plant) by 1 August 2015.</p>	<p>Army approval through the Contracting Officer’s Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming RI approval).</p>

Performance Objectives	Performance Standards
<p><b><u>Option:</u></b>  Achieve an approved RI for all media, except groundwater, at CC-RVAAP-77 Building 1037- Laundry Waste Water Sump by 1 August 2015.</p>	<p>Army approval through the Contracting Officer's Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming RI approval).</p>
<p><b><u>Option:</u></b>  Achieve an approved RI for all media, except groundwater, at CC-RVAAP-80 Group 2 Propellant Can Tops by 1 August 2015.</p>	<p>Army approval through the Contracting Officer's Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming RI approval).</p>
<p><b><u>Option:</u></b>  Achieve an approved RI for all media, except groundwater, at CC-RVAAP-83 Former buildings 1031 and 1039 by 1 August 2015.</p>	<p>Army approval through the Contracting Officer's Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming RI approval).</p>
<p>Achieve Non-Time-Critical Removal Action Appropriate for Future Land Use at the following sites located within Load Lines 1, 2, 3, 4, and 12 by 30 August 2013:</p> <p>CC-RVAAP-73 Facility-Wide Coal Storage  CC-RVAAP-79 DLA Ore Storage Sites</p>	<p>Army approval through the Contracting Officer's Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming RI approvals).</p>
<p>Achieve Non-Time-Critical Removal Action Appropriate for Future Land Use at the following site by 30 May 2014:</p> <p>CC-RVAAP-79 DLA Ore Storage Site – Main Ore Storage Yard</p>	<p>Army approval through the Contracting Officer's Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming RI approvals).</p>
<p>Achieve Non-Time-Critical Removal Action Appropriate for Future Land Use at the following sites by 30 July 2015:</p> <p>CC-RVAAP-73 Facility-Wide Coal Storage – Remaining Sites  CC-RVAAP-74 Building 1034-Motor Pool Hydraulic Lift  CC-RVAAP-78 Quarry Pond Surface Dump  CC-RVAAP-79 DLA Ore Storage Sites - Remaining Sites</p>	<p>Army approval through the Contracting Officer's Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming RI approvals).</p>
<p><b><u>Option:</u></b>  Achieve Non-Time-Critical Removal Action Appropriate for Future Land Use at the following site by 30 July 2015:</p> <p>CC-RVAAP-72 Facility-Wide Underground Storage Tanks</p>	<p>Army approval through the Contracting Officer's Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming RI approval).</p>

Performance Objectives	Performance Standards
<p><b>Option:</b>  Achieve Non-Time-Critical Removal Action Appropriate for Future Land Use at the following site by 1 August 2015:</p> <p>CC-RVAAP-75 George Road Sewage Treatment Plant</p>	<p>Army approval through the Contracting Officer's Representative (COR), and Ohio EPA concurrence (i.e., receipt of Ohio EPA documentation confirming RI approval).</p>
<p>For all Remedies, optimize capital and long-term costs.</p>	<p>Acceptance by the COR that the Contractor has demonstrated that the proposed remedy represents the lowest 30-year present worth cost to the Army, and is acceptable to the Ohio EPA.</p>

#### 1.4 Project Management Plan Organization

This PMP is organized following the requirements as stated in the PWS and includes the following sections:

- Section 1.0 – Introduction
- Section 2.0 – Project Management Organization
- Section 3.0 – Project Coordination
- Section 4.0 – Deliverables
- Section 5.0 – Quality Management
- Section 6.0 – Site Logistics
- Section 7.0 – Records Management
- Section 8.0 – Government Resources
- Section 9.0 – References

#### 1.5 Compliance Restoration Sites Operational History/Description

##### *CC-RVAAP-68 Electric Substations (East, West, and No. 3)*

Three electrical substations are included in this site. The east electrical substation comprises an area of approximately 12,300 square feet, which includes the land surrounding Building 25-27. There are no documented releases; however, aerial photographs and visual observations demonstrate stressed vegetation and staining outside the building, and around the former transformers. Volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and polychlorinated biphenyl's (PCBs) are possible contaminants of concern (COCs) for soil. The west electrical substation comprises an area of approximately 3,000 square ft., which includes the land around Building 28-28 and the surrounding land formerly used as the transformer station. This Area of Concern (AOC) excludes Building 28-28. One spill of approximately 500 gallons of transformer fluid occurred on the north side of the building. The impacted area was cleaned up by Emerald Environmental in 1997. Possible impacted soils may exist outside the building around the former transformers. VOCs, SVOCs, and PCBs are possible

COCs for soil. Substation No. 3 comprises an area of approximately 10,000 square feet. The substation and all transformer equipment have been removed from the site. There are no documented releases; however, aerial photographs and visual observations demonstrate stressed vegetation and staining outside the building, and around the former transformers. VOCs, SVOCs, and PCBs are possible COCs for soil.

#### *CC-RVAAP-69 Building 1048 Fire Station*

The fire station was located in the former Plant Administration Area in the northwest quadrant of the intersection of George Road and South Service Road. In 1968, the fire station was referred to as the Fire and Guard Building, and consisted of 12,130 square feet. The fire station building was demolished in late 2008, and the site currently remains undeveloped. Reportedly, it was common practice for the fire department to clean out fire extinguishers behind the west side of the fire building, and to allow the contents of the fire extinguishers (carbon tetrachloride) to spill onto the ground surface. The area of potential impact at this AOC includes the ground surface, located to the north – northwest of the former building location.

#### *CC-RVAAP-70 East Classification Yard*

The Ravenna facility was originally equipped with east and west classification yards during the facility's early operational years. The classification yards were used for the switching and maintenance of railroad cars and locomotives. The east classification yard is located east of Load Line 1 and the Main Defense Logistics Agency (DLA) Ore Storage Area in close proximity to the intersection of Ramsdell Road and Irons Road. The east classification yard Areas of Concern consists of Building 47-40 (Round House, still exists but is not actively used), the former herbicide storage shed (former Building 47-60), the containment area for former AST (documented spill of No. 5 fuel oil occurred within the containment area in 1986), and an outdoor open wash rack south of the East Classification Yard (north of Butts-Kistler Road). A railroad track complex is located east of the CR site and is currently utilized by the OHARNG.

#### *CC-RVAAP-71 Barn No. 5 Petroleum Release*

The site location is a vacant property along the southern property fence line in close proximity to former Post No. 6. There is a documented release on 13 May 1964 of approximately 20 barrels of gasoline to the ground surface inside of the south fence near Barn No. 5. The release occurred from a buried Standard Oil of Ohio (Sohio) pipeline.

#### *CC-RVAAP-72 Facility-Wide Underground Storage Tanks*

Facility records document the former presence and use of 50 underground storage tanks (USTs) at the Ravenna facility. Approximately 34 of the USTs were installed in 1941, with the remaining USTs installed between 1941 and 1981. The USTs were used for the storage of gasoline, diesel fuel, No. 5 heating oil, and No. 6 fuel oil. The USTs located in the Depot Area were reportedly filled with potassium dichromate to prevent corrosion when not in use. Readily available records suggest that nearly all of the USTs have been closed by removal, and the tanks have been scrapped. Table 1-2 presents a list of the former USTs at RVAAP. Closure documents

and official tank status records have not been obtained for most of the USTs. As such, additional records searches are required to further characterize the USTs. Petroleum and/or potassium dichromate impacted soils and/or groundwater may exist at several of the former UST sites. Possible USTs that were located within the Atlas Scrap Yard (Service Stations #1 and #2) are located within a Munitions Response Site (MRS), and Munitions and Explosives of Concern (MEC) avoidance procedures will be required for property visits and perimeter surveys in this area.

#### *CC-RVAAP-73 Facility-Wide Coal Storage*

Facility records document the former presence of approximately 17 coal storage locations at the Ravenna facility. Coal was historically used to fuel powerhouses and various other buildings at the site. Typically, coal storage consisted of placing the coal on the ground surface as coal piles or placing the coal in railcars adjacent to the subject buildings. The total area of potentially impacted media associated with the coal consists of approximately 222,500 square feet (about 5 acres). Coal storage occurred at the following locations on the Ravenna property:

- Load Line 1 Powerhouse;
- Load Line 2 Powerhouse;
- Building F-15;
- Building F-16;
- Atlas Scrap Yard (MRS);
- North Line Road Coal Tipple;
- Sand Creek Coal Tipple;
- East Classification Yard Round House;
- Administration Area;
- Depot Area Building U-5;
- Depot Area Building U-14;
- Fuze and Booster Road Powerhouse No. 5;
- Fuze and Booster Road Inert Storage No. 2F-N21;
- Fuze and Booster Service Road Powerhouse; and
- Area 6 Inert Storage.

Former coal storage sites located within Atlas Scrap Yard may also be within the Atlas Scrap Yard MRS; therefore, MEC avoidance procedures may be required for property visits and perimeter surveys in these areas.



**Table 1-2 Former Underground Storage Tanks at RVAAP**

<b>Tank Number</b>	<b>Location</b>	<b>Tank Number</b>	<b>Location</b>
RV-1	George Road Gas Station	RV-51	WW #4 – Gen
RV-2	George Road Gas Station	RV-52	Old ATLAS – Building T-18
RV-3	Post #1 Generator	RV-55	PH #1
RV-10	Post 24, Building F-4	RV-56	PH #1
RV-11	RR Yard	RV-57	PH #2
RV-12	PH #6	RV-58	PH #2
RV-13	Building U-6 (N) Depot	RV-59	PH #4
RV-14	Building U-6 (S) Depot	RV-60	PH #4
RV-15	Building U-3 (S) Depot	RV-61	PH #5
RV-16	Building U-3 (N) Depot	RV-62	PH #5
RV-17	Building A-6 (N) Depot	RV-63	PH #7
RV-18	Building A-6 (C) Depot	RV-64	PH #7
RV-19	Building A-6 (S) Depot	RV-66	PH #6
RV-20	Building DB-27 LL #2	RV-67	PH #6
RV-21	Building DB-27 LL #2	RV-73	Building T-2501
RV-22	RR Yard	RV-80	George Road Gas Station
RV-23	Building 1045	RV-81	Building 1047
RV-29	Building FE-22 LL #12	RV-82	Building 1047
RV-33	Deactivation Furnace	RV-83	Building 1047
RV-37	Building A-1 Depot	RV-86	Telephone Building (100' N)
RV-41	Building 2F-11 LL #6	RV-87	Telephone Building (NE)
RV-46	EE-102 (Bolton House)	RV-88	Fire Station #2
RV-47	Post 32 (Freedom)	RV-89	George Road Sewage
RV-50	WW #4 – Heat		

C = Central  
LL #2 = Load Line 2  
LL #12 = Load Line 12  
LL #6 = Load Line 6  
N = North  
NE = Northeast  
PH = Powerhouse  
RR = Railroad  
S = South  
SS = South Service  
WW = Waterworks

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### *CC-RVAAP-74 Building 1034 - Motor Pool Hydraulic Lift*

An in-ground hydraulic floor lift system has been identified inside the existing Motor Pool building. The hydraulic floor lift system is described in a 1969 drawing as a twin-post lift system constructed of metal. The below-grade system consists of a cast in concrete “L” shaped pit measuring approximately 12 feet (long portion of the “L” shape) and 4 feet (short portion of the “L” shape) in length, 3 feet in width, and 4 feet in depth. The pit is reportedly buried at depths ranging from 4 feet below ground surface (bgs) to approximately 8 feet bgs. The twin-post lift reportedly has a clearance of 6 feet between the floor surface and the bottom of the lift (height in the air). The floor lift system remains in place. It is also believed that an additional floor lift system was historically used at the Building 1034 Motor Pool facility.

### *CC-RVAAP-75 George Road Sewer Treatment Plant*

The George Road Sewer Treatment Plant is an inactive domestic sewage treatment plant. The plant was gravity fed and consisted of two Imhoff tanks, two trickling filters, and a clarifier. Sludge was dried in a greenhouse structure and spread over the ground surface (location unknown). The design capacity was 350,000 gallons per day. Reportedly, approximately 1,200 cubic feet of sludge was spread every three years. Wastes handled at the site consisted of domestic sewage and discharge from RVAAP-15 (Load Line 6) and RVAAP-30 (Load Line 7) pink water treatment. This site also received sludge from the Depot Sewage Treatment Plant (RVAAP-15). The site maintained a current Ohio National Pollution Discharge Elimination System (NPDES) permit (#31000000BD), which allowed discharge to Outfall No. 002 (to the adjacent receiving stream). The NPDES permit was maintained until 1993 when the facility ceased operation.

Available information indicates approximately one quart of mercury was released to the floor drain at the plant (date unknown). It is anticipated the mercury may have remained in the receiving piping and/or traps located below the floor drain in the pipe galley. If the mercury escaped the pipe galley, then it may have impacted the receiving (down-gradient) trickling filters and/or the down-gradient drying beds.

### *CC-RVAAP-76 Depot Area*

The Depot Area consisted of a waste oil storage tank located between Depot Buildings U-4 and U-5. The tank was an aboveground storage tank (AST) constructed of steel with a capacity of 400 gallons. The tank sat on crushed slag next to the motor oil storage shed. Waste oil from the motor pool area was stored in the AST until it was removed by an oil reclaimer. The AST was in operation from 1983 through 1993. In 1993, the contents of the AST were removed and the tank remained inactive until its removal (after 1996). The AST has since been removed and an earthen embankment remains at the location of the former tank. In addition, other areas within the Depot Area have been identified for inclusion under this CR site. Buildings 1W-2 and U-10 were reportedly used for the demilitarization and maintenance of various munitions. As such, portions of this CR site may possibly contain MEC, Munitions Constituents (MC), and/or Munitions Debris (MD), although it is not currently recognized as an MRS.

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### *CC-RVAAP-77 Building 1037 - Laundry Waste Water Sump*

The Building 1037 Laundry Waste Water Sump consists of a former below ground concrete sump located on the north side of Building 1037. The sump had a capacity of approximately 5,765 gallons. The unit was previously used as a settling tank for the discharge of laundry rinse water. Wash water was emptied approximately 12 times during 8 hours of operation and rinsing 3 times each 8 hours. The wash water entered the tank prior to the rinse water discharge had sufficient settling time so that the increase in rate from the rinse water did not disturb the settled matter on the tank bottom. Rinse water was then sent to RVAAP-22 (George Road Sewage Treatment Plant). The concrete waste water sump was removed in 2009.

### *CC-RVAAP-78 Quarry Pond Surface Dump*

This site consists of three debris piles (A, B, and C) that have a combined total of 23,450 (Pile A = 12,320 square feet, Pile B = 6,285 square feet, and Pile C = 4,845 square feet) square feet with an average thickness of 5 feet. In addition to the three debris piles, there is a former burn area and a rusted 55-gallon drum was located within Debris Pile B and a second rusted 55-gallon drum was located within Debris Pile C. The debris piles contain construction debris, scrap metal and unidentified materials. Debris Pile A is suspected to contain ACM. The area between Debris Piles A and B is suspected of containing construction debris and material excavated from the quarry. The April 2011 HRR Report recommended test pitting to determine if Debris Piles B and C contained ACM, and test pit the area between Debris Piles A and B to determine extent of construction debris and identify if ACM is present within this area.

### *CC-RVAAP-79 DLA Ore Storage Sites – Remaining Ore Sites*

Various ores were stored at RVAAP. The ore was stored on the ground in piles and in above ground storage tanks that did not have floors. Therefore, the stored ore within these ASTs had direct contact with the ground surface. Other materials were also stockpiled directly on the ground surface, including brass ingots, chemical chrome ore, copper ingots, ferrochrome ore, ferrous manganese ore and metallurgical manganese ore. The 2010 IAP estimated that approximately 66,592 cubic yards of soil is impacted at these sites and will require delineation, excavation and off-site disposal.

### *CC-RVAAP-80 Group 2 Propellant Can Tops*

CC-RVAAP-80 consists of the Group 2 Propellant Can Tops area. Propellant can lids or tops were identified on the ground surface/near-surface at the southern end of the former Group 2 Ammunition Storage Area. These materials are typically classified as range-related debris (RRD) (similar to munitions packaging materials); however, this site was never used or classified as an operational range. It is believed that the discarded propellant can tops might qualify as inert scrap metal. The propellant can tops located at the south end of Group 2 were initially identified by OHARNG trainees in the winter of 2008. The propellant can tops were observed in the vegetative area located immediately south of the ammunition storage magazines in the vicinity of the southern railroad spur lines. This area consists of approximately 539,572 square ft (12.4 acres). The Louisville District USACE performed an emergency survey with a metal

detector on a portion of the southern area ground surface. Results of the initial investigation revealed multiple magnetic anomalies in the surface and near-surface soils. On-site personnel visually identified the surface anomalies as propellants can lids or tops. During the emergency survey it was noted that the ground surface had been disturbed and contained hummocks (mounds) ranging in height from 1 ft to 2 ft throughout the survey area.

#### *CC-RVAAP-83 Former Buildings 1031 and 1039*

Former Buildings 1031 and 1039 was where the former Hospital and a former Laboratory was located, respectively. The OHARNG designated future land use for both building sites is Future OHARNG Cantonment Area.

#### *Building 1031 - Former Hospital Building*

The west end of the former Hospital Building included a gauge laboratory that was used for the development of large scale photos. Site-related constituents (SRCs) of concern are related to the former generation of x-ray acid/silver mix solutions, and common hospital wastes that may have been disposed of through the sanitary waste system, which were constructed of clay pipe. Potential SRCs for the sanitary system at the former Hospital Building are VOCs, SVOCs, and target analyte list (TAL) metals.

#### *Building 1039 - Former Laboratory Building*

The former Laboratory Building measured approximately 16,500 square feet. The structure contained three powder test rooms for the routine analyses of lead azide, mercury fulminate, and percussion element mixes. The laboratory was used for the testing of Load Line materials. During operations, the building contained and operated a photography laboratory, a chemistry laboratory, and a medical x-ray facility. The laboratory building was demolished by Lakeshore Engineering Services, Inc. (LES) between May 2006 and July 2007. Following demolition, all unpainted and uncontaminated brick and concrete was crushed and recycled off-site. The basement of Building 1039 was filled with approved clean soil, and was then seeded with approved grass seed. Potential SRCs for the sanitary system at the former Laboratory Building are VOCs, SVOCs, TAL metals, explosives and propellants.

## 2.0 PROJECT TEAM ORGANIZATION

ECC is the prime contractor for this Task Order. ECC is supported by teaming partners AMEC, Inc. (AMEC), and Prudent Technologies, Inc. (Prudent). AMEC and Prudent personnel will assist the ECC project team in the preparation of Work Plans, Quality Assurance Project Plans, Remedial Investigation Reports, Feasibility Studies, Risk Assessments, and Remedial Designs at the RVAAP sites, and in the conduct of field work. Additionally, several subcontractors will provide other services to complete the project as necessary, including but not limited to drilling, analytical services, surveying, waste management/disposal, and equipment supply services.

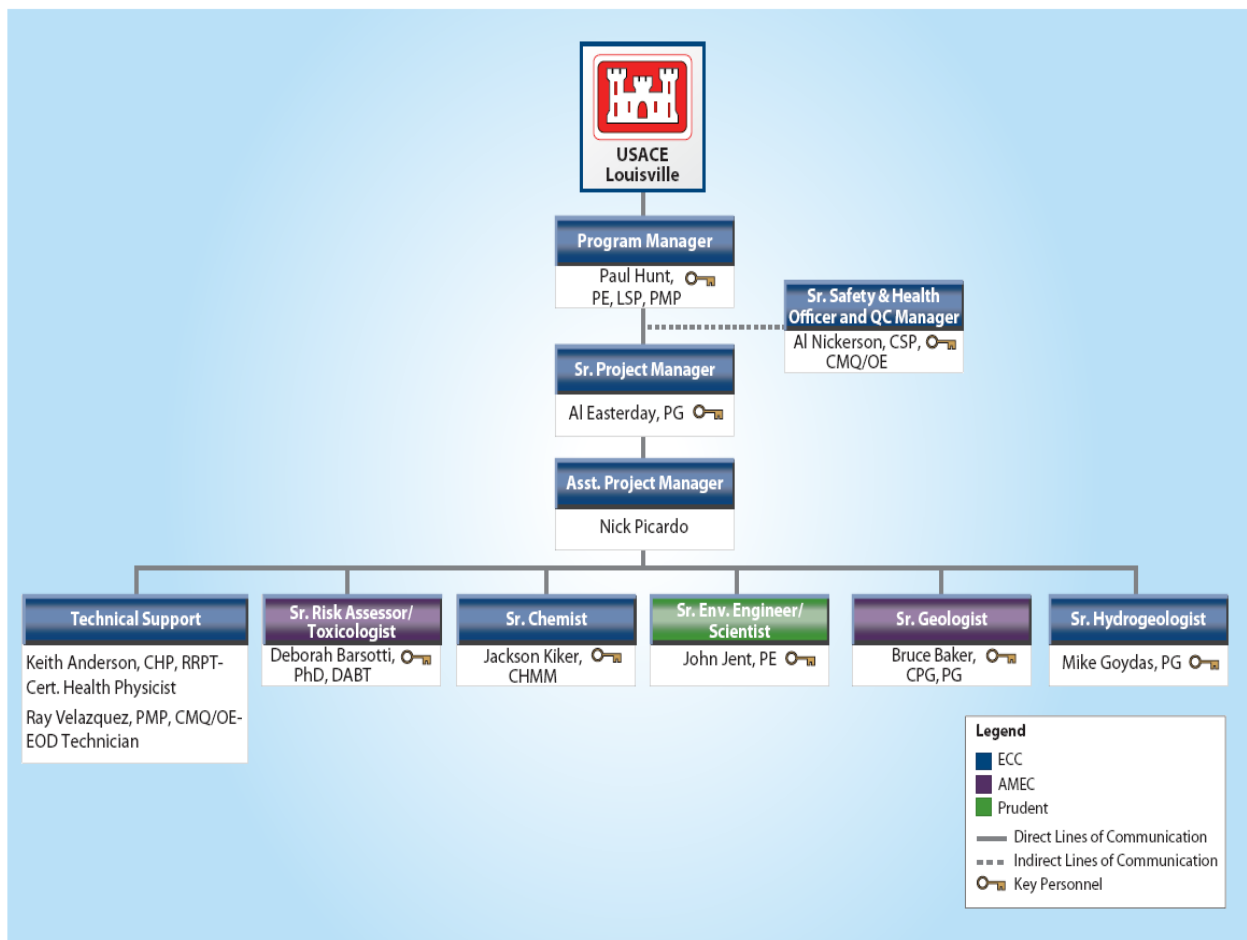
Figure 2-1 outlines the project organization for the proposed work at the RVAAP. Table 2-1 provides the names, titles, addresses, and phone numbers of personnel responsible for ensuring the execution of the project as well as key project stakeholders.

ECC's organizational structure is embodied by established capabilities and resources focused on strong project management. ECC's management team is supported by Health and Safety, Quality Assurance/Quality Control (QA/QC), Risk Management, the Contract Administrator, and Project Controls to assist in project execution. The ECC Project Manager (PM) will be the single point of contact (POC) for the Army, USACE COR, and the Ohio EPA for all contractual, technical, and field activities. This organizational structure is designed to provide the following:

- Provide the manpower and resources to meet project schedules.
- Successfully perform the required services.
- Administer the contractual requirements effectively to minimize the Army's management time.

Project execution is directed by the ECC management team located in the Marlborough, Massachusetts office. ECC's management team will also have the ability to draw resources from ECC's offices nationwide. ECC's PM for the project will have the authority to procure any resources required to effectively complete the required work.

**Figure 2-1 Project Organizational Chart**



**Table 2-1 Key Personnel for Ravenna Army Ammunition Plant**

<b>Name</b>	<b>Title</b>	<b>Address</b>	<b>Phone Number &amp; Email</b>
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<b>Prudent Technologies, Inc.</b>			
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*T = telephone number*

*F = fax number*

*C = cell phone number*

*E = e-mail address*

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### **3.0 PROJECT COORDINATION**

This PMP is structured to ensure all stakeholders are kept informed of the project status, existing or potential problems, and any changes that may be required to prudently manage the project and satisfy the needs of the Installation stakeholders and decision-makers.

#### **3.1 Project Stakeholders**

The project stakeholders identified in the PWS consist of the following:

- U.S. Army
- Ohio Environmental Protection Agency
- U.S. Environmental Protection Agency Region V
- Ohio Army National Guard
- Headquarters National Guard Bureau
- Restoration Advisory Board (RAB)

Specific Army stakeholders include the RVAAP staffs, Installation Management Command (IMCOM) as the Installation's parent organization, Department of Defense Explosive Safety Board (DDESB), U.S. Army Technical Center for Explosives Safety (USATCES), U.S. Army Center for Health Promotion and Preventative Medicine (USCHPPM), U.S. Army Environmental Command (USAEC) and the U.S. Army Corps of Engineers (USACE).

As previously mentioned, the Ohio EPA is the lead regulator at the RVAAP. The USEPA Region V is listed as a stakeholder; however, the agency has not been actively involved at the RVAAP.

#### **3.2 Coordination and Communication**

The COR, or his designated representative, will be kept informed of the project status by the ECC PM through monthly status reports, milestone presentations, conference calls, and frequent communication with the COR or designated representatives, as necessary. The ECC PM will be accessible to the COR at all times.

##### **3.2.1 Monthly Status Reports**

ECC will provide input to the project team in the form of monthly status reports, weekly contractor conference calls (during field work activities), and/or scheduling meetings as follows:

- ECC will provide a monthly status report for inclusion in the overall monthly report provided to Ohio EPA for approval per the Director's Final Findings and Orders.
- These reports will succinctly describe project status and progress at each site and follow the outline provided in Figure 3-1. A meeting can be scheduled to review the monthly

status report if necessary. Monthly status reports will be submitted by the 6th of the following month.

- When field work is being conducted at the site, ECC will participate in weekly contractor meetings to discuss and rectify any issues.
- ECC will participate in bi-weekly schedule conference calls.

**Figure 3-1 Monthly Progress Report**

<b>MONTHLY PROGRESS REPORT</b>			
<b>Contract No.</b> W912QR-04-D-0039/DO 0004		<b>Report Number:</b>	
<b>Project Number:</b> Delivery Order 0004		<b>Date:</b>	
<b>Contractor:</b> ECC 33 Boston Post Road West, Suite 340 Marlborough, MA 01752			
<b>Location:</b> Ravenna Army Ammunition Plant, Ravenna, OH			
<b>Project Name:</b> Investigation and Remediation at 14 Compliance Restoration Sites			
<b>SUMMARY OF ACTIVITIES:</b>			
<b>HEALTH AND SAFETY PERFORMANCE:</b>			
<b>PROBLEMS ENCOUNTERED/RESOLUTION:</b>			
<b>PLANNED ACTIVITIES:</b>			
Target/Milestone Activity	Scheduled Completion Date	Actual Completion Date	Status
<b>CHANGES IN KEY PERSONNEL:</b>			
<b>DEVIATION FROM SCHEDULE (with explanation):</b>			
<b>REMARKS:</b>			
<b>ECC PROJECT MANAGER:</b>		<b>SIGNATURE:</b>	

### **3.2.2 Milestone Presentations**

ECC will comply with Section 4.3 of the PWS. If requested, milestone presentations will be made to the COR at the completion of each milestone to provide in depth analysis, discuss lessons learned, and to present approaches for completion of future milestones. At the COR's request, ECC may also make milestone presentations to the other project stakeholders to show achievement of the performance objectives. The Contract Line Item Number (CLIN) structure, included in the Milestone Schedule in Appendix B, presents ECC's proposed execution strategy.

The Milestone Schedule is reflective of ECC's proposal, the requirements of the PWS, and any subsequent negotiations with the Army as to how the Army will structure funding for the project at the CLIN level. Payments will be tied to the successful completion of a milestone or an interim milestone plan approved by ECC and the Army, through the COR. All interim milestones should be associated with easily demonstrated metrics tied to performance measurements. Milestones must have a defined means for demonstrating completion in order to facilitate certification and approval. The milestone schedule presented in Appendix B has been approved by both the Army and ECC. ECC's Milestone Schedule may be subject to change over the course of the project depending on the progress of work and what is required to reach performance goals. In the event of milestone changes, replacement pages for this PMP may be issued to document changes following approval by the Army and ECC.

### **3.2.3 Phone Conferences/Informal Site Meetings**

As necessary with all multi-site, multi-task projects, phone conferences and informal site meetings with the COR or his representative(s) will be documented appropriately through follow-up emails and summaries in the monthly status reports

### **3.3 Regulatory Coordination**

All regulatory coordination will be approved by the Army through the COR. The ECC PM will provide the necessary support to initiate, schedule, and address all regulatory aspects of the project (e.g., organizing discussions with regulators concerning site recommendations, obtaining regulator comments on site documents and appropriately addressing them, and obtaining written documentation, as necessary, of regulator input for all sites in the PWS). All communication to stakeholders and regulators will be coordinated with the USACE and RVAAP. ECC will keep a record of phone conversations and written correspondence affecting decisions relating to the performance of site documents.

The COR, or other COR designee, will attend and represent the Army at all meetings with the regulators if they so chose. ECC will prepare and submit minutes of all significant meetings attended. With approval of the COR, ECC may also informally discuss issues with regulators and provide an after-action report back to the COR. ECC will not contact regulators without prior approval of the COR. The Army will be the signature authority for all agreements, remediation documentation and off-site characterization and disposal documents. For this PWS, Ohio EPA approval is tied to the performance objectives and standards presented in Table 1-1.

In addition, communications that contain information that could affect ECC's ability to achieve the PWS milestones for the 14 Compliance Restoration sites that occurs between the Army and the regulators, without the presence of ECC, shall be transmitted to ECC through the COR. After reviewing the documents, ECC will provide the Army with comments on any items or issues related that may impact ECC's execution of the work. Documentation for all meetings and conference calls will be completed by the ECC PM and circulated within ten business days to the necessary stakeholders as determined by the Army.

### **3.4 Public Involvement**

All public participation coordination will be approved by the Army through the CO. ECC will provide the necessary support to initiate, schedule, and manage public involvement activities of the project. Public comments will be requested and addressed consistent with the CERCLA/SARA and NCP. The COR, or other Army designee, shall attend and represent the Army at all meetings with the public. ECC will also provide support for RAB meetings and present project-related information (e.g., work plans and findings) to the RAB, as requested by the COR and in accordance with the PWS and terms and conditions of the contract.

### **3.5 Ohio Army National Guard**

ECC will coordinate all site access with the Ohio Army National Guard.

## 4.0 DELIVERABLES

Deliverables for this Delivery Order will be produced in preliminary draft, draft, and final versions and in hard copy and electronic Portable Document Format (PDF). All deliverables will be prepared in accordance with CERCLA and the National Contingency Plan (NCP) following requirements of the Ohio EPA DFFO for RVAAP and the most current version of the RVAAP Deliverable Documents Formatting Guidelines (Vista 2009). Preliminary draft versions of documents will be prepared and submitted to the Army for review. The Army under this task order will provide comments to ECC on any document within 20 business days. It is expected that the Army will provide ECC with one set of consolidated comments through the COR or his designee, and inform ECC when all comments have been transmitted. Once initial comments from the Army are addressed, a draft version of the document will be prepared for review by the regulators and the Army unless the Army requests a review of the revised preliminary draft before it is issued to the regulators. Following the receipt and resolution of stakeholder comments on the draft document, it will be revised and a final version of the document issued for the record. All documents submitted to Ohio EPA will be identified as draft until completion of stakeholder coordination, when they will be signed and finalized (if required). The anticipated comment and review cycle for each project deliverable is as follows:

- Preliminary Draft Deliverables: Army, NGB, and OHARNG review only – up to 20 business days.
- Draft Deliverable comment response and concurrence by Army – up to 15 business days.
- Draft Deliverable Team review: Ohio EPA, NGB, OHARNG, and Army – minimum of 45 calendar days.
- Final Deliverable comment response and concurrence by Ohio EPA, NGB, OHARNG and Army – up to 10 business days.
- Final Deliverable Team review/approval: Ohio EPA, NGB, OHARNG, and Army – minimum of 45 calendar days.

Table 4-1 Summarizes the major documents expected to be prepared to support work at the fourteen CR Sites identified in the PWS. Project deliverables and written communication among the Army, RVAAP, Ohio EPA, NGB, OHARNG and ECC will be delivered to the addresses shown on Table 4-2, which also indicates the number of hard and electronic copies of deliverables to be distributed.

**Table 4-1 Required Deliverables List**

<b><u>Site:</u></b>	<b><u>Deliverable:</u></b>
All Sites	Project Management Plan
All Sites	Quality Assurance Surveillance Plan (draft)
All Sites	Sample and Analysis Plan (Addendum to the RVAAP Facility-Wide Sample and Analysis Plan, 2011)
All Sites	Quality Assurance Project Plan (Addendum to the RVAAP Facility-Wide Quality Assurance Project Plan, 2011)
All Sites	Site Safety and Health Plan (Addendum to the RVAAP Facility-Wide Sample and Analysis Plan, 2001)
CC-RVAAP-71 Barn No. 5 Petroleum Release	Historical Records Review Report
CC-RVAAP-83 Former Buildings 1031 and 1039	Historical Records Review Report
<b><u>Option:</u></b> CC-RVAAP-71 Barn No. 5 Petroleum Release	Site Inspection Work Plan Site Inspection Report
<b><u>Option:</u></b> CC-RVAAP-83 Former Buildings 1031 and 1039	Site Inspection Work Plan Site Inspection Report
CC-RVAAP-70 East Classification Yard	Site Inspection Work Plan Site Inspection Report
CC-RVAAP-72 Facility-Wide Underground Storage Tanks (USTs)	Site Inspection Work Plan Site Inspection Report
CC-RVAAP-75 George Road Sewage Treatment Plan	Site Inspection Work Plan Site Inspection Report
CC-RVAAP-77 Building 1037 - Laundry Waste Water Sump	Site Inspection Work Plan Site Inspection Report
CC-RVAAP-79 DLA Ore Storage Sites – Remaining Ore Sites	Remedial Investigation Work Plan Remedial Investigation Report
CC-RVAAP-76 Depot Area	Remedial Investigation Work Plan Remedial Investigation Report Feasibility Study
CC-RVAAP-68 Electric Substations (East, West, and No. 3)	Remedial Investigation Work Plan Remedial Investigation Report
CC-RVAAP-69 Building 1048 Fire Station	Remedial Investigation Work Plan Remedial Investigation Report



<b><u>Site:</u></b>	<b><u>Deliverable:</u></b>
CC-RVAAP-73 Facility-Wide Coal Storage	Remedial Investigation Work Plan Remedial Investigation Report
CC-RVAAP-74 Building 1034 - Motor Pool Hydraulic Lift	Remedial Investigation Work Plan Remedial Investigation Report
CC-RVAAP-78 Quarry Pond Surface Dump	Remedial Investigation Work Plan Remedial Investigation Report
CC-RVAAP-79 DLA Ore Storage Sites – Remaining Ore Sites	Remedial Investigation Work Plan Remedial Investigation Report
<b><u>Option:</u></b> CC-RVAAP-70 East Classification Yard	Remedial Investigation Work Plan Remedial Investigation Report
<b><u>Option:</u></b> CC-RVAAP-71 Barn No. 5 Petroleum Release	Remedial Investigation Work Plan Remedial Investigation Report
<b><u>Option:</u></b> CC-RVAAP-72 Facility-Wide Underground Storage Tanks (USTs)	Remedial Investigation Work Plan Remedial Investigation Report
<b><u>Option:</u></b> CC-RVAAP-75 George Road Sewage Treatment Plant	Remedial Investigation Work Plan Remedial Investigation Report
<b><u>Option:</u></b> CC-RVAAP-77 Building 1037 Laundry Waste Water Sump	Remedial Investigation Work Plan Remedial Investigation Report
<b><u>Option:</u></b> CC-RVAAP-80 Group 2 Propellant Can Tops	Remedial Investigation Work Plan Remedial Investigation Report
<b><u>Option:</u></b> CC-RVAAP-83 Former Buildings 1031 and 1039	Remedial Investigation Work Plan Remedial Investigation Report
CC-RVAAP-73 Facility-Wide Coal Storage	Removal Action Work Plan Removal Action Report
CC-RVAAP-79 DLA Ore Storage Sites – Remaining Ore Sites	Removal Action Work Plan Removal Action Report
CC-RVAAP-73 Facility-Wide Coal Storage	Removal Action Work Plan Removal Action Report
CC-RVAAP-74 Building 1034 Motor Pool Hydraulic Lift	Removal Action Work Plan Removal Action Report
CC-RVAAP-78 Quarry Pond Surface Dump	Removal Action Work Plan Removal Action Report
CC-RVAAP-79 DLA Ore Storage Sites – Remaining Ore Sites	Removal Action Work Plan Removal Action Report
<b><u>Option:</u></b> CC-RVAAP-72 Facility-Wide Underground Storage Tanks (USTs)	Removal Action Work Plan Removal Action Report

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**Table 4-2 Document Distribution List**

<u>Agency Contact/Address</u>	<u>Preliminary Draft</u>	<u>Draft</u>	<u>Final</u>
U.S. Army Environmental Command Attn: Mark Eldridge, 2450 Connell Road Fort Sam Houston, TX 78234-7664	HC: 0 EC: 1	HC: 0 EC: 1	HC: 0 EC: 1
BRAC - Assistant Chief of Staff Installation Management Attn: William O'Donnell, BRAC Office Program Manager 2530 Crystal Drive Arlington, VA 22202	HC: 0 EC: 1	HC: 0 EC: 1	HC: 0 EC: 1
Ravenna Army Ammunition Plant Attn: Mark Patterson, Facility Manager Building 1037 8451 State Route 5 Ravenna, OH 44266	HC: 2 EC: 2	HC: 2 EC: 2	HC: 2 EC: 2
Louisville District Corps of Engineers Attn: Glen Beckham, LRL IRP/MMRP Project Manager 600 Martin Luther King Jr. Place Louisville, KY 40202	HC: 3 EC: 3	HC: 3 EC: 3	HC: 3 EC: 3
National Guard Bureau Attn: Kim Harriz, Cleanup Program Manager NGB-AR-EI 111 S. George Mason Drive Arlington, VA 22206	HC: 0 EC: 1	HC: 0 EC: 1	HC: 0 EC: 1
Ohio Army National Guard Attn: Katie Tait, Environmental Specialist 1438 State Route 534, SW Newton Falls, OH 44444	HC: 1 EC: 1	HC: 1 EC: 1	HC: 1 EC: 1
Ohio EPA – NE District, DERR Attn: Eileen Mohr, Facility Coordinator 2110 E. Aurora Road Twinsburg, OH 44087	HC: 0 EC: 0	HC: 2 EC: 2	HC: 2 EC: 2
Ohio EPA Office of Federal Facility Oversight, SW District Attn: Bonnie Buthker, Federal Facilities Coordinator 401 E. 5th Street Dayton, OH 45402	HC: 0 EC: 1	HC: 0 EC: 1	HC: 0 EC: 1
ECC Attn: Al Easterday, Project Manager 33 Boston Post Road West, Suite 340 Marlborough, MA 01752	HC: 1 EC: 1	HC: 1 EC: 1	HC: 1 EC: 1

HC = Hard Copy  
EC = Electronic Copy

#### **4.1 Additional Site Plans**

Prior to the beginning of any field work, ECC will prepare any additional plans or documents (e.g., sampling and analysis plans, quality assurance project plans, waste minimization plans, health and safety plans) consistent with the regulatory drivers listed in Section 1.0 of the PWS, and any other agreements, orders, or regulations that apply to the Installation and sites. These plans and documents shall be subject to Army and Ohio EPA review and approval.

#### **4.2 Project Schedule**

The overall project schedule is shown in Appendix A and incorporates ECC's latest time frame for achieving the performance objectives presented in the PWS for the fourteen CR Sites at the time of award of the Delivery Order. A milestone schedule has been prepared and is presented in Appendix B. This schedule will be provided to Ohio EPA for approval per the Director's Final Findings and Orders as needed. A detailed schedule for each site will also be completed and included in the appropriate work plan for each site.

The project schedule will be updated and submitted with the monthly status report as necessary when significant changes are made. The schedule will include all events that impact the project and will be updated for actual starts and finishes, unforeseen or uncontrollable delays, changes in approaches at sites, etc.

#### **4.3 Geographic Information System**

ECC will provide the Ravenna Environmental Information System (REIMS) administrator with electronic copies of all documents in PDF and Geographic Information System (GIS) files used to prepare documents. The GIS information will be presented on maps and submitted to the REIMS administrator in electronic format. Drawings will be submitted in electronic (PDF) format. Maps will be submitted in ArcView compatible format or at a minimum in ESRI shape files, ArcInfo coverages, or AutoCad formats. All electronic files will be submitted to the REIMS administrator on compact discs.

#### **4.4 Project Repository and Administrative Record**

At the completion of each major milestone, ECC will provide to the Installation POC, in both paper and electronic (PDF) format, project-related information to ensure pertinent documentation and data are available for project reviews, and to provide a clear record to support decisions and remediation documentation. The Installation POC will include this information in the project repository and the Administrative Record, as appropriate. The Administrative Record is located at:

Ravenna Army Ammunition Plant  
Building 1037  
8451 State Route 5 - Ravenna, OH 44266

ECC shall update at least quarterly, a multimedia (i.e., both paper and electronic format) project repository of all project-related information to ensure that pertinent documentation and data are available for project reviews, and to provide a clear record of the contract approach to support final decisions and remediation completion. This repository is the property of the Army and available to the Army upon request by the CO. A project repository is currently maintained at two locations as follows:

Reed Memorial Library  
167 E. Main Street  
Ravenna, OH 44266  
Phone: (330) 296-2827

Newton Falls Public Library  
204 South Canal Street  
Newton Falls, Ohio 44444-1694  
Phone: (330) 872-1282

#### **4.5 Army Environmental Database and Environmental Restoration Information System**

ECC shall comply with the applicable requirements for data validation and submission for the Army Environmental Databases and Environmental Restoration Information System (ERIS) in accordance with Section 4.8.1 of the PWS. Once a site is identified in the Delivery Order as having achieved remedy-in-place (RIP) (i.e., appropriate documentation is finalized), ECC will be responsible for providing the CO, or their designated representative, with the data and documentation necessary for the closeout of each site in the Army Environmental Database – Restoration Module (AEDB-R). In addition, ECC will upload semi-annually, all generated analytical data into the ERIS. The Army, through the CO, will provide data specifications for the AEDB-R and ERIS to ECC. The Army will be responsible for uploading all previous data related to the sites covered under the PWS for ECC's use and it is expected the Army will provide all previous data in ERIS format. The Army shall also provide ECC with the required access and sponsorship to complete these tasks in the ERIS and AEDB-R.

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## 5.0 QUALITY MANAGEMENT

This chapter discusses quality management and presents the QA/QC strategy to be used by the Army to assess progress toward project milestones. ECC will ensure that the quality of all work performed or produced under this Delivery Order meets Army approval through the COR. A Quality Assurance Project Plan (QAPP) and a Quality Assurance Surveillance Plan will be prepared by ECC and approved by the COR prior to the performance of any physical work. ECC will prepare the QAPP as an addendum to the Quality Control Plan for the 2010 Phase I Remedial Investigations Services at Compliance Restoration Sites (9 Areas of Concern) (SAIC, 2010) to ensure QA/QC requirements will be met under this Task Order.

In addition, the QAPP will be provided to the Ohio EPA for approval per the Director's Final Findings and Orders. To the extent possible, ECC will utilize existing QA/QC plans prepared for RVAAP and generate addendums to these plans for any new activities. This will ensure procedural consistencies, a higher level of quality and reduce review time. The QA/QC plans will identify the personnel, procedures, controls, instructions, tests, verifications, documents, and forms to be used, and the records to be maintained. Key processes and procedures addressed in the QA/QC plans may include:

- Organizational Description—Duties, responsibilities, and authorities of key project team members.
- Definable Features of Work—Listing and brief descriptions of all definable features identified within the applicable specifications and/or work plan documents.
- Daily Reporting—Complete daily QC reports augmented with supportive data and documentation that is transmitted to the client on a daily basis.
- Submittal Management Procedures—Procedures and methods that certify all submittals are in compliance with the task order requirements.
- Testing Procedures—Procedures and methods that ensure test control measures are adequately performed, documented, and conform to task order requirements.
- Completion Inspection—Procedures for conducting a pre-final inspection, developing a punch list, and resolving deficiencies in preparation for the final inspection.
- Deficiency Reporting—Reporting and tracking using a systematic process that acquires effective corrective action and QC verification.
- Documents and Records—Procedures that ensure a current, accurate, and complete project records system and factual evidence that all required QC activities and/or tests have been performed.

ECC will provide notification to the COR and Ohio EPA a minimum of 15 working days prior to the commencement of significant project activities. These activities will include, but are not limited to, meetings for work at sites, sampling activities, drilling, geophysical investigations, and monitoring events. This will provide the COR with the opportunity to verify compliance with task order requirements and adherence to the stipulations of the project QAPP. ECC will also notify RVAAP to ensure there is no conflict with any ongoing Installation activities and that appropriate facility access requirements have been met.

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## 5.1 Quality Control Testing

Chemical QC will be provided whenever sampling or analysis for chemical constituents is required in order to achieve milestones. QC for traditional soils or geotechnical testing also will be included. The laboratory(ies) to be used by ECC will be National Environmental Laboratory Accreditation Conference (NELAC)-certified, will perform testing in accordance with requirements of the DOD Quality Systems Manual (QSM), Version 3 (or the latest approved version), and will be compliant with the Louisville Chemistry Guideline (LCG). If necessary, and with approval from the Army, USACE, and the Ohio EPA, ECC may establish an onsite testing laboratory at the project site. All onsite testing will meet the requirements of USEPA, specific state regulator requirements and the most stringent requirements of the most recently approved DOD QSM and the current LCG.

All samples collected and analyzed under this Delivery Order will be generated in Electronic Data Deliverable (EDD) format compatible with uploading requirements for ERIS and other required databases as discussed in Section 4.5. ECC will complete data verification, including successfully processing all required electronic data. The EDD will accurately reflect all analytical quality requirements. All electronic data submitted by the contract laboratory is required to be error-free and in complete agreement with the hard copy data. Laboratories will provide the appropriate Chemical Abstracts Services (CAS) number to a specific analyte. A Load Summary Report and a transmittal letter from the laboratory will accompany the hard copy data report, certifying that the EDD is in agreement with hard copy data reports and was found to be free of errors. ECC will perform data validation on all data received. A copy of the data package also will be provided to RVAAP for the project repositories.

## 5.2 Data Quality Management

ECC has developed an integrated process for acquiring and managing environmental data for this project. ECC uses a Microsoft SQL Server 2005 as its data repository with quality checks at critical steps. ECC's database will accommodate all field and analytical laboratory data associated with environmental site investigation and remediation for this project. Microsoft Visual Studio 2005 will be the primary tool used for producing project deliverables (such as report tables) or to support data analysis, evaluation, and visualization using tools such as a GIS. ECC will incorporate ArcSDE as the interface for the GIS solution and immediate data retrieval mechanism. GIS data set shall be accompanied by metadata conforming to the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata (CSDGM) and be provided in a geodatabase that is compliant with the Spatial Data Facilities, Infrastructure, and Environment (SDSFIE) standards and the requirements of the PWS. ECC will test the horizontal accuracy of the GIS data in accordance with the National Standard for Spatial Data Accuracy (NSSDA). All GIS data shall be provided in the Universal Transverse Mercator (UTM) coordinate system and shall have a datum of WGS84. Datum WGS84 is the World Geodetic System (WGS) of 1984 and it is the reference frame used by the U.S. Department of Defense (DoD) and is defined by the National Geospatial-Intelligence Agency (NGA). WGS84 is used by DoD for all its mapping, charting, surveying, and navigation needs, including its GPS "broadcast" and "precise" orbits. The primary objective of ECC's data acquisition and management process is to generate data that meets the project's data quality



objectives and EDD requirements in a timely and efficient manner. ECC's database management enhances the ability to accomplish this goal through:

- Ease of use and familiarity when working with ECC subcontractor laboratories
- Direct upload of EDD from the laboratory into the database
- Integrated data completeness and quality checks
- Direct support for validation of analytical data per the Facility-Wide Sampling and Analysis Plan (SAIC, 2011), QSM and LCG requirements
- Data management POC for project deliverables, data requests, and reporting

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## **6.0 SITE LOGISTICS**

The ECC PM will communicate with the COR and/or designee to review and coordinate field schedules and activities for execution of the PWS.

### **6.1 Health and Safety**

ECC will produce and implement a written Accident Prevention Plan/Site Safety and Health Plan (APP/SSHP) which will be an addendum to the approved Facility-Wide Safety and Health Plan (FWSHP) (USACE 2011) that will meet the requirements of the federal, state, and local laws and regulations prior to conducting any fieldwork. ECC will ensure that its subcontractors, suppliers, and support personnel follow all established safety and health provisions.

At a minimum, the SSHP will contain the following elements: site description and contaminant characterization, safety and health hazard(s) assessment and risk analysis, safety and health staff organization and responsibilities, site-specific training and medical surveillance parameters, personal protective equipment and decontamination facilities and procedures to be used, monitoring and sampling required, safety and health work precautions and procedures, site control measures, on-site first aid and emergency equipment, emergency response plans and contingency procedures (on-site and off-site), logs, reports, and recordkeeping. Personnel involved in certain munitions response activities will, as required, meet the qualifications of DOD Explosives Safety Board, Technical Pamphlet (TP) 18, and Minimum Qualifications for UXO Technicians and UXO-Qualified Personnel. All personnel performing munitions response activities that present an explosive risk will be limited to a 50-hour workweek, with no individual workday exceeding 10 hours total, unless specifically authorized by the COR. Accident reporting and recordkeeping will be performed in accordance with USACE EM 385-1-1, part 01.D for all USACE elements and missions under the command of the Chief of Engineers.

ECC's proposed work will adhere to the RVAAP Facility-Wide Safety and Health Plan (USACE 2011), ECC's approved SSHP (and associated site-specific addendums) will tier under the RVAAP FWSHP and neither document can be implemented without the other. ECC's health and safety goal is to provide an injury free work environment where facilities and projects are free of recognized hazards; and people, equipment, and the environment are not placed at unreasonable risk of injury or damage.

### **6.2 Protection of Property**

All fourteen Compliance Restoration sites are believed to be limited to the property boundaries of the RVAAP. As such, the USACE does not anticipate that formal Rights of Entries (ROEs) will be required to access the boundaries of the sites. Access to the fourteen CR site properties will be provided by the on-site BRAC-D Facility Manager, and members of the on-site Ohio Army National Guard. Should formal ROEs be required to assess off-property locations, then the U.S. Government will obtain the necessary ROEs for ECC.

ECC will coordinate with Army (RVAAP, USACE and Camp Ravenna) to minimize potential damage to existing resources and property. Mobilization at intrusive investigation sites will be sequenced to ensure that impacts are minimized. ECC will be responsible for any damage that may be caused to property of the United States (Federal property) or any other property owned by others during ECC activities under this contract and will exercise due diligence in the protection of all property located on the premises against fire or damage from any and all other causes. Any property of the United States or owned by others damaged or destroyed by the ECC incident to the exercise of the privileges herein granted will be promptly repaired or replaced by ECC to a condition satisfactory to the COR or reimbursement is made by ECC sufficient to restore or replace the property to a condition satisfactory to the COR in accordance with Federal Acquisition Regulation (FAR) Clause 52.245-2.

## 7.0 RECORDS MANAGEMENT

ECC will maintain records of all data collected and related files. All files, including data, lists, remediation results, photographs, and maps, will be organized and will be filed. Electronic files of data, maps, QA/QC data, waste profiles and other pertinent information will be properly archived. Reports and submittals will be provided to the stakeholders as required. All reports will be assigned unique document control numbers. Any records pertaining to or possibly pertaining to any matter in litigation or a matter that may possibly be litigated shall be retained for at least 5 years after the litigation is completed and may be retained longer if otherwise required by contract, applicable law or this policy and may be discarded ONLY with written approval of a company attorney. All project documents will be prepared in accordance with the most recent version of the RVAAP Deliverable Document Format Guidelines.

ECC encourages the use of electronic storing of any and all records when feasible from a practical and financial standpoint. Any documents that are stored electronically on disks may be maintained there permanently if necessary. Any such disks will be labeled clearly and adequately so that record retrieval is efficient. Media chosen for electronic storage will be capable of maintaining records in a readable form for the required retention period and will be able to be accessed even with changes in hardware and software during the retention period. The minimum retention period for specific deliverable types that may be encountered on the project are as follows:

- Accident Reports and Claims – 7 years
- Corporate Records (Minutes, By-Laws, Articles, Shareholder/Stock Records, Acquisition and Sale Records) – Permanent
- Contracts and Leases – 10 years from expiration/termination
- Project Documents (Plans, contracts, notes, etc.) – 10 years from end of project
- Financial Documents (purchase orders, invoices, etc.) – 10 years from end of project
- Contracts and Contract Documents – 10 years from end of project
- Invoices and Billing Documents – 10 years from end of project
- Technical Drawings and Information – Minimum 8 years but according to contract or applicable law for longer retention
- Accounts Payable Ledgers – 7 years
- Accounts Receivable Ledgers – 7 years
- Government Audit Reports – Permanent
- Bank Reconciliations – 2 years
- Bank Statements – 7 years
- Budget Information – 3 years
- Canceled Checks – 7 years
- Canceled Checks – Permanent
- Cash Books – Permanent
- Depreciation Schedules – Permanent
- Deposit Slips – 10 years
- Expense Reports – 10 years
- Financial Statements – Permanent

- Financing Agreements – Permanent
- General Ledgers – Permanent
- Internal Audit Work Papers – 7 years from date of report
- Inventory Records – 7 years
- Invoices to and from Customers – 7 years
- Payroll Records – 7 years
- Purchase Orders, General – 7 years
- Sales Records – 7 years
- Tax Returns – Permanent
- Stock Option Records – 10 years
- Litigation Records – 5 years after conclusion
- Legal Records, Other – 10 years
- Legal Records related to Assets – Permanent
- Legal Records related to Acquisitions & Mergers – Permanent
- Insurance Records – Permanent
- Intellectual property – Permanent
- Real Estate/Deeds – Permanent
- Sales Records – 10 years
- Training Records – Permanent
- Workers Compensation Records – 10 years

## **8.0 GOVERNMENT RESOURCES**

Government-furnished resources, contractor-furnished and/or acquired property and contractor-furnished resources are discussed in this section.

### **8.1 Army-Furnished Resources**

Under this Delivery Order, the Army shall provide specified resources to ECC for investigation and remediation purposes. Army-furnished resources to be provided to ECC under this task order will include the following:

- Access to Army-maintained records, reports, data, analyses, and information, in their current format (e.g., paper copy, electronic, tape, disks, compact disks), as related to access to DOD and Army policy and guidance documents
- ROEs for all sites in the Delivery Order
- Costs for evacuations, compensation, and temporary housing for displaced residents during intrusive activities and MEC destruction

### **8.2 Contractor-Furnished Resources**

ECC, as the Contractor, must possess all the required expertise, knowledge, equipment and tools required to meet or exceed the government's objectives identified in the Delivery Order in accordance with established industry standards. Contractor furnished resources to be provided by ECC includes the following:

- Coordination with the Army and the Installation in order to get access to the Installation and any off-site properties, as required for execution of the PWS and by doing so, will follow the procedures described during the Contractors' meeting at the Installation.
- Coordination with the Army and the Installation in order to gain access to available infrastructure (e.g., buildings, roadways, waste management units, other Installation facilities) and utilities (e.g., electric power and telephone lines, natural gas and water supply distribution pipelines, and wastewater discharge conveyances), as required for execution of the PWS.
- All waste generated under this contract shall be the responsibility of the Contractor with respect to waste containerization and labels, waste characterization, temporary waste staging and storage, waste transportation, and the proper off-site disposal (within 90 days of generation).
- Any other necessary resources needed to achieve the defined performance objectives in the PWS.

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## **9.0 REFERENCES**

Ohio Environmental Protection Agency (Ohio EPA) 2004. *Director's Final Findings and Orders (DFFO)* for RVAAP, dated June 10.

SAIC 2011. *Facility-Wide Sample and Analysis Plan for Environmental Investigations at the Ravenna Army Ammunition Plant, Ravenna, Ohio*, February 24.

USACE 2011. *Facility-Wide Safety and Health Plan for Environmental Investigations at the Ravenna Army Ammunition Plant, Ravenna, Ohio*, February 24.

Vista Sciences Corporation (Vista) 2009. *Ravenna Army Ammunition Plant Deliverable Document Format Guidelines, Version 18*, dated December 21.

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## **APPENDICES**

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**APPENDIX A**

**PROJECT SCHEDULE  
(Subject to Change)**

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Activity ID	CLIN	Activity Description	Cal Days	Early Start	Early Finish	2011					2012					2013					2014					2015					2016					2017																																									
						J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
<b>Ravenna Army Ammunition Plant</b>																																																																													
<b>Project General Conditions</b>																																																																													
<b>General Conditions</b>																																																																													
<i>General Conditions</i>																																																																													
0000	0000	Task Order Award	0	15AUG11		◆ Task Order Award																																																																							
0005	0000	Notice to Proceed	0	15AUG11		◆ Notice to Proceed																																																																							
0010	0000	ECC Project Management (2011)	139*	15AUG11	31DEC11	■ ECC Project Management (2011)																																																																							
0030	0000	Conduct Army Kick-Off Meeting	1	08NOV11*	08NOV11	■ Conduct Army Kick-Off Meeting																																																																							
0040	0000	Conduct Kick-Off Meeting - Regulators	1	16NOV11	16NOV11	■ Conduct Kick-Off Meeting - Regulators																																																																							
0012	0000	ECC Project Management (2012)	366	01JAN12	31DEC12	■ ECC Project Management (2012)																																																																							
0014	0000	ECC Project Management (2013)	365	01JAN13	31DEC13	■ ECC Project Management (2013)																																																																							
0016	0000	ECC Project Management (2014)	365	01JAN14	31DEC14	■ ECC Project Management (2014)																																																																							
0018	0000	ECC Project Management (thru 30JUL15)	210*	01JAN15	29JUL15	■ ECC Project Management (thru 30JUL15)																																																																							
<b>Monthly Administrative Record Updates</b>																																																																													
9000	0000	Monthly Updates to Project Repository	1,445	15AUG11	29JUL15	■ Monthly Updates to Project Repository																																																																							
9010	0000	Quarterly Updates to Admin Record	1,445	15AUG11	29JUL15	■ Quarterly Updates to Admin Record																																																																							
<b>Contractual Milestones</b>																																																																													
0044	0000	Clin 0001 Approval Final PMP & QASP	0		17FEB12	◆ Clin 0001 Approval Final PMP & QASP ◆ 15FEB12																																																																							
0050	0000	Begin Field Work	0	20MAY12		◆ Begin Field Work																																																																							
0046	0000	Clin 0002 Approved Historical Records Review	0		06JUL12	◆ Clin 0002 Approved Historical Records Review ◆ 30JUL12																																																																							
0052	0000	Clin 0003 (Opt) Approved SI CC-RVAAP-71	0		27MAY13	◆ Clin 0003 (Opt) Approved SI CC-RVAAP-71 ◆ 30JUL13																																																																							
0054	0000	Clin 0004 (Opt) Approved SI CC-RVAAP-83	0		06MAY13	◆ Clin 0004 (Opt) Approved SI CC-RVAAP-83 ◆ 30JUL13																																																																							
0056	0000	Clin 0005 Approved SI CC-RVAAP-70, 72, 75 & 77	0		17JUL13	◆ Clin 0005 Approved SI CC-RVAAP-70, 72, 75 & 77 ◆ 30JUL13																																																																							
0058	0000	Clin 0006 Approved RI CC-RVAAP-79 (DLA-Main Ore)	0		26JAN14	◆ Clin 0006 Approved RI CC-RVAAP-79 (DLA-Main Ore) ◆ 30MAY14																																																																							
0060	0000	Clin 0007 Approved FS CC-RVAAP-76	0		29JAN14	◆ Clin 0007 Approved FS CC-RVAAP-76 ◆ 30JUN14																																																																							
0062	0000	Clin 0008 Approved RI CC-RVAAP-68,69,73,74,78,79	0		04MAR15	◆ Clin 0008 Approved RI CC-RVAAP-68,69,73,74,78,79 ◆ 30JUL15																																																																							
0064	0000	Clin 0009 (Opt) Approved RI CC-RVAAP-70	0		08MAR15	◆ Clin 0009 (Opt) Approved RI CC-RVAAP-70 ◆ 01AUG15																																																																							
0066	0000	Clin 0010 (Opt) Approved RI CC-RVAAP-71	0		04MAR15	◆ Clin 0010 (Opt) Approved RI CC-RVAAP-71 ◆ 01AUG15																																																																							
0068	0000	Clin 0011 (Opt) Approved RI CC-RVAAP-72	0		27MAR15	◆ Clin 0011 (Opt) Approved RI CC-RVAAP-72 ◆ 01AUG15																																																																							
0070	0000	Clin 0012 (Opt) Approved RI CC-RVAAP-75	0		24APR15	◆ Clin 0012 (Opt) Approved RI CC-RVAAP-75 ◆ 01AUG15																																																																							
0072	0000	Clin 0013 (Opt) Approved RI CC-RVAAP-77	0		24MAY15	◆ Clin 0013 (Opt) Approved RI CC-RVAAP-77 ◆ 01AUG15																																																																							
0074	0000	Clin 0014 (Opt) Approved RI CC-RVAAP-80	0		21JUN15	◆ Clin 0014 (Opt) Approved RI CC-RVAAP-80 ◆ 01AUG15																																																																							
0076	0000	Clin 0015 (Opt) Approved RI CC-RVAAP-83	0		15JUL15	◆ Clin 0015 (Opt) Approved RI CC-RVAAP-83 ◆ 01AUG15																																																																							

Start Date	15AUG11	Early Bar
Finish Date	29JUL15	Contractual Milestone
Data Date	15AUG11	Progress Bar
Run Date	16NOV11 16:24	Critical Activity

File Name: RP08  
Filter: All

**ECC**  
**Ravenna Army Ammunition Plant**  
**Environmental Investigation & Remediation**  
**14 Compliance Restoration Sites**  
**Schedule for Draft PMP**

Sheet 1 of 20

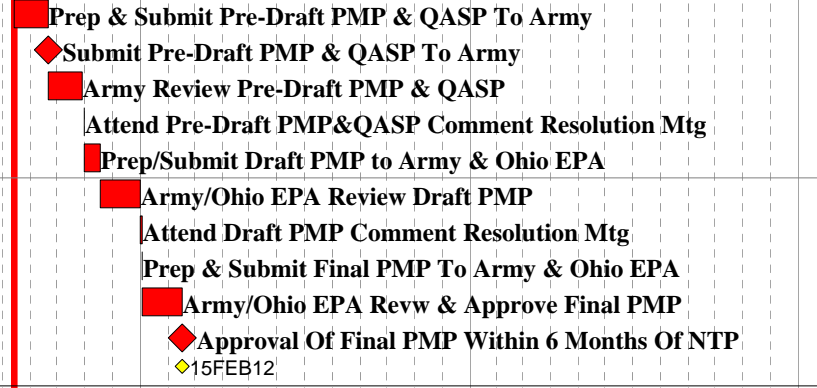
Activity ID	CLIN	Activity Description	Cal Days	Early Start	Early Finish	2011				2012				2013				2014				2015				2016				2017																													
						J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
0078	0000	Clin 0016 Approved NTC RA LL CC-RVAAP-73 & 79	0		30AUG13																																																						
0080	0000	Clin 0017 Approved NTC RA CC-RVAAP-79 (DLA-Main)	0		28MAY14																																																						
0082	0000	Clin 0018 Approved NTC RA CC-RVAAP-73,74,78, & 79	0		11MAR15																																																						
0084	0000	Clin 0019 (Opt) Approved NTC RA CC-RVAAP-72	0		15MAY15																																																						
0086	0000	Clin 0020 (Opt) Approved NTC RA CC-RVAAP-75	0		15MAY15																																																						
9999	0000	Projected Completion	0		29JUL15																																																						
Subtotal	0000		1,445	15AUG11	29JUL15																																																						

### CLIN 0001 Achieve Approved PMP & QASP

**Submittals**

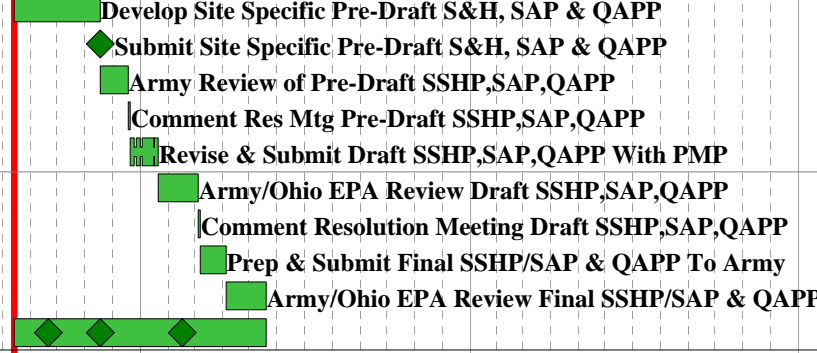
**Project Management Plan (PMP)**

Activity ID	CLIN	Description	Cal Days	Early Start	Early Finish
0105	0001	Prep & Submit Pre-Draft PMP & QASP To Army	38	15AUG11	21SEP11
0110	0001	Submit Pre-Draft PMP & QASP To Army	0		21SEP11
0115	0001	Army Review Pre-Draft PMP & QASP	37	22SEP11	28OCT11
0120	0001	Attend Pre-Draft PMP&QASP Comment Resolution Mtg	1	31OCT11	31OCT11
0135	0001	Prep/Submit Draft PMP to Army & Ohio EPA	17	01NOV11	17NOV11
0140	0001	Army/Ohio EPA Review Draft PMP	45	18NOV11	01JAN12
0145	0001	Attend Draft PMP Comment Resolution Mtg	1	02JAN12	02JAN12
0160	0001	Prep & Submit Final PMP To Army & Ohio EPA	1	03JAN12	03JAN12
0170	0001	Army/Ohio EPA Revw & Approve Final PMP	45	04JAN12	17FEB12
0165	0001	Approval Of Final PMP Within 6 Months Of NTP	0		17FEB12



**Site SSHP/SAP & QAPP Addendum**

Activity ID	CLIN	Description	Cal Days	Early Start	Early Finish
0200	0001	Develop Site Specific Pre-Draft S&H, SAP & QAPP	95	15AUG11	17NOV11
0205	0001	Submit Site Specific Pre-Draft S&H, SAP & QAPP	0		17NOV11
0210	0001	Army Review of Pre-Draft SSHP,SAP,QAPP	30	18NOV11	17DEC11
0215	0001	Comment Res Mtg Pre-Draft SSHP,SAP,QAPP	2	19DEC11	20DEC11
0220	0001	Revise & Submit Draft SSHP,SAP,QAPP With PMP	20	21DEC11	20JAN12
0225	0001	Army/Ohio EPA Review Draft SSHP,SAP,QAPP	45	21JAN12	05MAR12
0230	0001	Comment Resolution Meeting Draft SSHP,SAP,QAPP	2	06MAR12	07MAR12
0235	0001	Prep & Submit Final SSHP/SAP & QAPP To Army	20	08MAR12	04APR12
0240	0001	Army/Ohio EPA Review Final SSHP/SAP & QAPP	45	05APR12	19MAY12

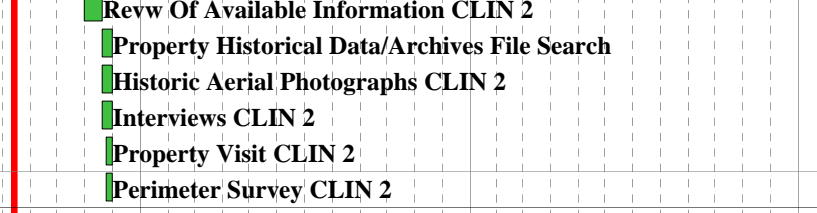


### CLIN 0002 Historical Records Review 71, 83

**Field Activities Work Plan CLIN 2**

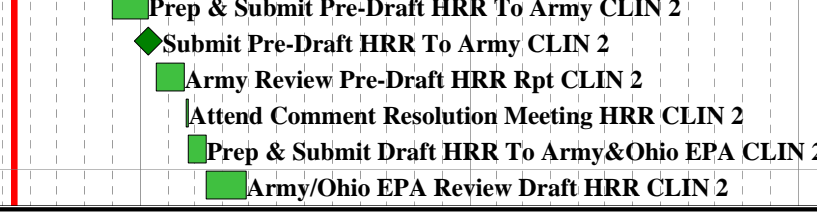
**Historical Records Research**

Activity ID	CLIN	Description	Cal Days	Early Start	Early Finish
1000	0002	Revw Of Available Information CLIN 2	20	01NOV11*	20NOV11
1010	0002	Property Historical Data/Archives File Search	10	21NOV11	30NOV11
1020	0002	Historic Aerial Photographs CLIN 2	10	21NOV11	30NOV11
1030	0002	Interviews CLIN 2	10	21NOV11	30NOV11
1040	0002	Property Visit CLIN 2	7	24NOV11	30NOV11
1050	0002	Perimeter Survey CLIN 2	7	24NOV11	30NOV11



**HRR Report**

Activity ID	CLIN	Description	Cal Days	Early Start	Early Finish
1100	0002	Prep & Submit Pre-Draft HRR To Army CLIN 2	40	01DEC11	09JAN12
1105	0002	Submit Pre-Draft HRR To Army CLIN 2	0		09JAN12
1110	0002	Army Review Pre-Draft HRR Rpt CLIN 2	30	20JAN12	18FEB12
1120	0002	Attend Comment Resolution Meeting HRR CLIN 2	2	21FEB12	22FEB12
1150	0002	Prep & Submit Draft HRR To Army&Ohio EPA CLIN 2	20	23FEB12	13MAR12
1160	0002	Army/Ohio EPA Review Draft HRR CLIN 2	45	14MAR12	27APR12















Activity ID	CLIN	Activity Description	Cal Days	Early Start	Early Finish	2011					2012					2013					2014					2015					2016					2017																																									
						J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
<b>CC-RVAAP-74 (Bldg 1034-Mtr Pool Hydraulic Lift)</b>																																																																													
<b>Field Investigation</b>																																																																													
4070	0008	Mobilize To Site CC-RVAAP-74 CLIN 8	1	12MAY14	12MAY14	Mobilize To Site CC-RVAAP-74 CLIN 8																																																																							
4080	0008	Conduct Field Sampling CC-RVAAP-74 CLIN 8	5	13MAY14	19MAY14	Conduct Field Sampling CC-RVAAP-74 CLIN 8																																																																							
4090	0008	Demobilize Off-Site CC-RVAAP-74 CLIN 8	1	20MAY14	20MAY14	Demobilize Off-Site CC-RVAAP-74 CLIN 8																																																																							
4100	0008	Conduct Lab Analysis CC-RVAAP-74 CLIN 8	30	20MAY14	18JUN14	Conduct Lab Analysis CC-RVAAP-74 CLIN 8																																																																							
4110	0008	Data Review Meeting CC-RVAAP-74 CLIN 5	2	19JUN14	20JUN14	Data Review Meeting CC-RVAAP-74 CLIN 5																																																																							
<b>CC-RVAAP-78 (Quarry Pond Surface Dump)</b>																																																																													
<b>Field Investigation</b>																																																																													
4150	0008	Mobilize To Site CC-RVAAP-78 CLIN 8	1	21MAY14	21MAY14	Mobilize To Site CC-RVAAP-78 CLIN 8																																																																							
4160	0008	Conduct Field Sampling CC-RVAAP-78 CLIN 8	10	22MAY14	05JUN14	Conduct Field Sampling CC-RVAAP-78 CLIN 8																																																																							
4170	0008	Demobilize Off-Site CC-RVAAP-78 CLIN 8	1	06JUN14	06JUN14	Demobilize Off-Site CC-RVAAP-78 CLIN 8																																																																							
4180	0008	Conduct Lab Analysis CC-RVAAP-78 CLIN 8	30	06JUN14	05JUL14	Conduct Lab Analysis CC-RVAAP-78 CLIN 8																																																																							
4190	0008	Data Review Meeting CC-RVAAP-78 CLIN 5	2	07JUL14	08JUL14	Data Review Meeting CC-RVAAP-78 CLIN 5																																																																							
<b>CC-RVAAP-79 (DLA Ore Storage - Remaining Sites)</b>																																																																													
<b>Field Investigation</b>																																																																													
4230	0008	Mobilize To Site CC-RVAAP-79RS CLIN 8	1	09JUN14	09JUN14	Mobilize To Site CC-RVAAP-79RS CLIN 8																																																																							
4240	0008	Conduct Field Sampling CC-RVAAP-79RS CLIN 8	10	10JUN14	23JUN14	Conduct Field Sampling CC-RVAAP-79RS CLIN 8																																																																							
4250	0008	Demobilize Off-Site CC-RVAAP-79RS CLIN 8	2	24JUN14	25JUN14	Demobilize Off-Site CC-RVAAP-79RS CLIN 8																																																																							
4260	0008	Conduct Lab Analysis CC-RVAAP-79 CLIN 8	30	24JUN14	23JUL14	Conduct Lab Analysis CC-RVAAP-79 CLIN 8																																																																							
4270	0008	Data Review Meeting CC-RVAAP-79 CLIN 8	2	24JUL14	25JUL14	Data Review Meeting CC-RVAAP-79 CLIN 8																																																																							
<b>Field Work Completion Report CLIN 8</b>																																																																													
<b>Field Work Completion Report</b>																																																																													
4280	0008	Prep/Submit Field Work Compl Report CLIN 8	20	26JUL14	14AUG14	Prep/Submit Field Work Compl Report CLIN 8																																																																							
4290	0008	Submit Field Work Compl Report CLIN 8	0		14AUG14	Submit Field Work Compl Report CLIN 8																																																																							
<b>Remedial Investigation Report CLIN 8</b>																																																																													
<b>Remedial Investigation Reports</b>																																																																													
4350	0008	Dev RIR Pre-Draft CLIN 8	8	15AUG14	22AUG14	Dev RIR Pre-Draft CLIN 8																																																																							
4355	0008	Submit Pre-Draft RI Report CLIN 8	0		22AUG14	Submit Pre-Draft RI Report CLIN 8																																																																							
4360	0008	Army Revw RIR Pre-Draft CLIN 8	30	23AUG14	21SEP14	Army Revw RIR Pre-Draft CLIN 8																																																																							
4370	0008	Comment Res Mtg Pre-Draft RI Rpt CLIN 8	2	22SEP14	23SEP14	Comment Res Mtg Pre-Draft RI Rpt CLIN 8																																																																							
4380	0008	Revise & Submit RIR Draft CLIN 8	30	24SEP14	23OCT14	Revise & Submit RIR Draft CLIN 8																																																																							
4410	0008	Army/Ohio EPA Revw RIR Draft CLIN 8	45	24OCT14	07DEC14	Army/Ohio EPA Revw RIR Draft CLIN 8																																																																							
4420	0008	Comment Res Mtg RIR CLIN 8	2	08DEC14	09DEC14	Comment Res Mtg RIR CLIN 8																																																																							
4450	0008	Revise & Submit RIR Final CLIN 8	40	10DEC14	18JAN15	Revise & Submit RIR Final CLIN 8																																																																							
4460	0008	Army/Ohio EPA Revw & Apprv RIR Fnl CLIN8	45	19JAN15	04MAR15	Army/Ohio EPA Revw & Apprv RIR Fnl CLIN8																																																																							
4470	0008	Submit RI Report - Final - CLIN 8	0		04MAR15	Submit RI Report - Final - CLIN 8																																																																							
<b>Approved Remedial Investigation CLIN 8</b>																																																																													
<b>Remedial Investigation</b>																																																																													
68-8500	0008	Apprvd RI Elect Substa E,W & 3 CC-RVAAP-68 CLIN8	0		04MAR15	Apprvd RI Elect Substa E,W & 3 CC-RVAAP-68 CLIN8 30JUL15																																																																							
69-8500	0008	Apprvd Remedial Investigation CC-RVAAP-69 CLIN 8	0		04MAR15	Apprvd Remedial Investigation CC-RVAAP-69 CLIN 8 30JUL15																																																																							
73-8500	0008	Apprvd Remedial Investigation CC-RVAAP-73 CLIN 8	0		04MAR15	Apprvd Remedial Investigation CC-RVAAP-73 CLIN 8 30JUL15																																																																							
74-8500	0008	Apprvd Remedial Investigation CC-RVAAP-74 CLIN 8	0		04MAR15	Apprvd Remedial Investigation CC-RVAAP-74 CLIN 8 30JUL15																																																																							
78-8500	0008	Apprvd Remedial Investigation CC-RVAAP-78 CLIN 8	0		04MAR15	Apprvd Remedial Investigation CC-RVAAP-78 CLIN 8 30JUL15																																																																							
79-8500	0008	Apprvd RI Remaining Sites CC-RVAAP-79RS CLIN 8	0		04MAR15	Apprvd RI Remaining Sites CC-RVAAP-79RS CLIN 8 30JUL15																																																																							
Subtotal	0008		397	01AUG13	04MAR15																																																																								

Activity ID	CLIN	Activity Description	Cal Days	Early Start	Early Finish	2011				2012				2013				2014				2015				2016				2017																																															
						J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
<b>CLIN 0009(Opt)Remedial Investigation CC-RVAAP-70</b>																																																																													
<b>CC-RVAAP-70 (East Classification Yard)</b>																																																																													
<i>Remedial Investigation Work Plan</i>																																																																													
5100	0009	Prep & Submit Pre-Draft RIWP To Army CC-RVAAP-70	30	30SEP13	29OCT13															■	Prep & Submit Pre-Draft RIWP To Army CC-RVAAP-70																																																								
5105	0009	Submit Pre-Draft RIWP To Army CC-RVAAP-70	0		29OCT13															◆	Submit Pre-Draft RIWP To Army CC-RVAAP-70																																																								
5110	0009	Army Review Pre-Draft RIWP CC-RVAAP-70	30	09NOV13	08DEC13															■	Army Review Pre-Draft RIWP CC-RVAAP-70																																																								
5115	0009	Attend Comment Resolution Meeting RIWP RVAAP-70	2	09DEC13	10DEC13																Attend Comment Resolution Meeting RIWP RVAAP-70																																																								
5120	0009	Prep&Submit Draft RIWP To Army/Ohio EPA RVAAP-70	20	11DEC13	30DEC13															■	Prep&Submit Draft RIWP To Army/Ohio EPA RVAAP-70																																																								
5125	0009	Army/Ohio EPA Review Draft RIWP CC-RVAAP-70	45	31DEC13	13FEB14															■	Army/Ohio EPA Review Draft RIWP CC-RVAAP-70																																																								
5130	0009	Attend Comment Resolution Mtg Drft RIWP RVAAP-70	2	14FEB14	18FEB14																Attend Comment Resolution Mtg Drft RIWP RVAAP-70																																																								
5135	0009	Prep & Submit Final RIWP To Army/EPA CC-RVAAP-70	30	19FEB14	20MAR14															■	Prep & Submit Final RIWP To Army/EPA CC-RVAAP-70																																																								
5140	0009	Army /Ohio EPA Revw & Approve Fnl RIWP RVAAP-70	45	21MAR14	04MAY14															■	Army /Ohio EPA Revw & Approve Fnl RIWP RVAAP-70																																																								
5145	0009	Submit RI Work Plan - Final CC-RVAAP-70	0		04MAY14															◆	Submit RI Work Plan - Final CC-RVAAP-70																																																								
<i>Field Investigation</i>																																																																													
5250	0009	Mobilize To Site CC-RVAAP-70	1	30MAY14	30MAY14																Mobilize To Site CC-RVAAP-70																																																								
5260	0009	Conduct Field Sampling CC-RVAAP-70	10	02JUN14	13JUN14															■	Conduct Field Sampling CC-RVAAP-70																																																								
5280	0009	Conduct Lab Analysis CC-RVAAP-70	30	14JUN14	13JUL14															■	Conduct Lab Analysis CC-RVAAP-70																																																								
5270	0009	Demobilize Off-Site CC-RVAAP-70	2	16JUN14	17JUN14																Demobilize Off-Site CC-RVAAP-70																																																								
5290	0009	Data Review Meeting CC-RVAAP-70	2	14JUL14	15JUL14																Data Review Meeting CC-RVAAP-70																																																								
<i>Field Work Completion Report</i>																																																																													
5300	0009	Prep/Submit Field Work Compl Report CC-RVAAP-70	20	16JUL14	04AUG14															■	Prep/Submit Field Work Compl Report CC-RVAAP-70																																																								
5310	0009	Submit Field Work Compl Report CC-RVAAP-70	0		04AUG14															◆	Submit Field Work Compl Report CC-RVAAP-70																																																								
<i>Remedial Investigation Report</i>																																																																													
5350	0009	Develop RI Report - Pre-Draft CC-RVAAP-70	40	05AUG14	13SEP14															■	Develop RI Report - Pre-Draft CC-RVAAP-70																																																								
5355	0009	Submit Pre-Draft RIR CC-RVAAP-70	0		13SEP14															◆	Submit Pre-Draft RIR CC-RVAAP-70																																																								
5360	0009	Army Revw RI Report - Pre-Draft CC-RVAAP-70	30	14SEP14	13OCT14															■	Army Revw RI Report - Pre-Draft CC-RVAAP-70																																																								
5370	0009	Comment Res Mtg RIR Pre-Draft CC-RVAAP-70	2	14OCT14	15OCT14																Comment Res Mtg RIR Pre-Draft CC-RVAAP-70																																																								
5390	0009	Revise & Submit RI Report - Draft CC-RVAAP-70	20	16OCT14	04NOV14															■	Revise & Submit RI Report - Draft CC-RVAAP-70																																																								
5400	0009	Army/Ohio EPA Review RIR Draft CC-RVAAP-70	45	05NOV14	19DEC14															■	Army/Ohio EPA Review RIR Draft CC-RVAAP-70																																																								
5410	0009	Comment Res Mtg RIR Draft CC-RVAAP-70	2	22DEC14	23DEC14																Comment Res Mtg RIR Draft CC-RVAAP-70																																																								
5430	0009	Prep&Submit Final RIR To Army/Ohio EPA RVAAP-70	30	24DEC14	22JAN15															■	Prep&Submit Final RIR To Army/Ohio EPA RVAAP-70																																																								
5440	0009	Army/Ohio EPA Revw & Apprv Final RIR CC-RVAAP-70	45	23JAN15	08MAR15															■	Army/Ohio EPA Revw & Apprv Final RIR CC-RVAAP-70																																																								
5450	0009	Submit RI Report - Final - CC-RVAAP-70	0		08MAR15															◆	Submit RI Report - Final - CC-RVAAP-70																																																								
<i>Remedial Investigation</i>																																																																													
70-8500	0009	Approved Remedial Investigation CC-RVAAP-70	0		08MAR15															◆	Approved Remedial Investigation CC-RVAAP-70																																																								
Subtotal 0009						358	30SEP13	08MAR15															◆																																																						
<b>CLIN 0010(Opt)Remedial Investigation CC-RVAAP-71</b>																																																																													
<b>CC-RVAAP-71 (Barn No. 5 Petroleum Release)</b>																																																																													
<i>Remedial Investigation Work Plan</i>																																																																													
5505	0010	Prep & Submit Pre-Draft RIWP To Army CC-RVAAP-71	30	30OCT13	28NOV13															■	Prep & Submit Pre-Draft RIWP To Army CC-RVAAP-71																																																								
5510	0010	Submit Pre-Draft RIWP To Army CC-RVAAP-71	0		28NOV13															◆	Submit Pre-Draft RIWP To Army CC-RVAAP-71																																																								
5515	0010	Army Review Pre-Draft RIWP CC-RVAAP-71	30	09DEC13	07JAN14															■	Army Review Pre-Draft RIWP CC-RVAAP-71																																																								
5520	0010	Attend Comment Resolution Meeting RIWP RVAAP-71	1	08JAN14	08JAN14																Attend Comment Resolution Meeting RIWP RVAAP-71																																																								
5525	0010	Prep&Submit Draft RIWP To Army/Ohio EPA RVAAP-71	20	09JAN14	28JAN14															■	Prep&Submit Draft RIWP To Army/Ohio EPA RVAAP-71																																																								
5530	0010	Army/Ohio EPA Review Draft RIWP CC-RVAAP-71	45	29JAN14	14MAR14															■	Army/Ohio EPA Review Draft RIWP CC-RVAAP-71																																																								
5535	0010	Attend Comment Resolution Mtg Drft RIWP RVAAP-71	3	17MAR14	19MAR14																Attend Comment Resolution Mtg Drft RIWP RVAAP-71																																																								
5540	0010	Prep & Submit Final RIWP To Army/EPA CC-RVAAP-71	20	20MAR14	08APR14															■	Prep & Submit Final RIWP To Army/EPA CC-RVAAP-71																																																								
5545	0010	Army /Ohio EPA Revw & Approve Fnl RIWP RVAAP-71	45	09APR14	23MAY14															■	Army /Ohio EPA Revw & Approve Fnl RIWP RVAAP-71																																																								
5550	0010	Submit RI Work Plan Final CC-RVAAP-71	0		23MAY14															◆	Submit RI Work Plan Final CC-RVAAP-71																																																								
<i>Field Investigation</i>																																																																													
5680	0010	Mobilize To Site CC-RVAAP-71	1	02JUN14	02JUN14																Mobilize To Site CC-RVAAP-71																																																								









Activity ID	CLIN	Activity Description	Cal Days	Early Start	Early Finish	2011				2012				2013				2014				2015				2016				2017																							
						J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
7560	0014	Comment Res Mtg RIR Pre-Draft CC-RVAAP-80	2	06FEB15	09FEB15																																																
7580	0014	Revise & Submit RI Report - Draft CC-RVAAP-80	20	10FEB15	01MAR15																																																
7590	0014	Army/Ohio EPA Review RIR Draft CC-RVAAP-80	45	02MAR15	15APR15																																																
7600	0014	Comment Res Mtg RIR Draft CC-RVAAP-80	2	16APR15	17APR15																																																
7620	0014	Prep&Submit Final RIR To Army/Ohio EPA RVAAP-80	20	18APR15	07MAY15																																																
7630	0014	Army/Ohio EPA Revw & Apprv Final RIR RVAAP-80	45	08MAY15	21JUN15																																																
7640	0014	Submit RI Report - Final - CC-RVAAP-80	0		21JUN15																																																
<b>Remedial Investigation</b>																																																					
7650	0014	Approved Remedial Investigation CC-RVAAP-80	0		21JUN15																																																
Subtotal	0014		331	27FEB14	21JUN15																																																

**CLIN 0015(Opt)Remedial Investigation CC-RVAAP-83**

**CC-RVAAP-83 (Former Bldgs 1031 & 1039)**

<b>Remedial Investigation Work Plan</b>					
7705	0015	Prep & Submit Pre-Draft RIWP To Army RVAAP-83	30	29MAR14	27APR14
7710	0015	Submit Pre-Draft RIWP To Army RVAAP-83	0		27APR14
7715	0015	Army Review Pre-Draft RIWP RVAAP-83	30	08MAY14	06JUN14
7720	0015	Attend Comment Resolution Meeting RIWP RVAAP-83	1	09JUN14	09JUN14
7725	0015	Prep&Submit Draft RIWP To Army/Ohio EPA RVAAP-83	10	10JUN14	19JUN14
7730	0015	Army/Ohio EPA Review Draft RIWP RVAAP-83	45	20JUN14	03AUG14
7735	0015	Attend Comment Resolution Mtg Drft RIWP RVAAP-83	3	04AUG14	06AUG14
7740	0015	Prep & Submit Final RIWP To Army/EPA RVAAP-83	20	07AUG14	26AUG14
7745	0015	Army /Ohio EPA Revw & Approve Fnl RIWP RVAAP-93	45	27AUG14	10OCT14
7750	0015	Submit RI Work Plan - Final RVAAP-83	0		10OCT14
<b>Field Investigation</b>					
7780	0015	Mobilize To Site CC-RVAAP-83	1	14OCT14	14OCT14
7785	0015	Conduct Field Sampling CC-RVAAP-83	10	15OCT14	28OCT14
7790	0015	Demobilize Off-Site CC-RVAAP-83	2	29OCT14	30OCT14
7795	0015	Conduct Lab Analysis CC-RVAAP-83	30	29OCT14	27NOV14
7800	0015	Data Review Meeting CC-RVAAP-83	2	28NOV14	01DEC14
<b>Field Work Completion Report</b>					
7805	0015	Prep/Submit Field Work Compl Report CC-RVAAP-83	20	02DEC14	21DEC14
7810	0015	Submit Field Work Compl Report CC-RVAAP-83	0		21DEC14
<b>Remedial Investigation Report</b>					
7840	0015	Develop RI Report - Pre-Draft CC-RVAAP-83	40	22DEC14	30JAN15
7843	0015	Submit Pre-Draft RIR To Army CC-RVAAP-83	0		30JAN15
7845	0015	Army Revw Pre-Draft RI Report CC-RVAAP-83	30	31JAN15	01MAR15
7850	0015	Comment Res Mtg Pre-Draft RIR CC-RVAAP-83	2	02MAR15	03MAR15
7860	0015	Revise & Submit Draft RI Report CC-RVAAP-83	20	04MAR15	23MAR15
7865	0015	Army/Ohio EPA Review Draft RI Report CC-RVAAP-83	45	24MAR15	07MAY15
7870	0015	Comment Res Mtg Draft RI Report CC-RVAAP-83	2	08MAY15	11MAY15
7880	0015	Prep&Submit Final RIR To Army/Ohio EPA RVAAP-83	20	12MAY15	31MAY15
7885	0015	Army/Ohio EPA Revw & Apprv Final RIR RVAAP-83	45	01JUN15	15JUL15
7890	0015	Submit Final RI Report CC-RVAAP-83	0		15JUL15
<b>Remedial Investigation</b>					
7895	0015	Approved Remedial Investigation CC-RVAAP-83	0		15JUL15
Subtotal	0015		326	29MAR14	15JUL15

**CLIN 0016 NTC RA Load Lines 1,2,3,4,13 - 73&79**

**Engr Evaluation/Cost Analysis (EE/CA) CLIN 16**

<b>Engineering Evaluation/Cost Analysis (EE/CA)</b>					
7905	0016	Prep & Submit PreDraft EE/CA To Army RVAAP-73&79	40	06FEB12*	16MAR12
7910	0016	Submit Pre-Draft EE/CA To Army CC-RVAAP-73&79	0		16MAR12

■ Prep & Submit PreDraft EE/CA To Army RVAAP-73&79  
 ◆ Submit Pre-Draft EE/CA To Army CC-RVAAP-73&79

















**APPENDIX B**

**MILESTONE PAYMENT SCHEDULE**

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**Milestone Payment Schedule  
Ravenna Army Ammunition Plant  
Environmental Investigation and Remediation  
14 Compliance Restoration Sites**

January 27, 2012

CLIN	Sub-CLIN	Tasks	Payment Metric
0001		<b>Project Management Plan and Quality Assurance Surveillance Plan</b>	
	0001.AA	Draft Project Management Plan	Resolution of Army Comments on Draft
	0001.AB	Final Project Management Plan	Regulatory Approval
	0001.AC	Draft Quality Assurance Surveillance Plan	Resolution of Army Comments on Draft
0002		<b>Historical Records Review CC-RVAAP-71 and CC-RVAAP-83 Barn No. 5 Petroleum Release and Former Buildings 1031 and 1039</b>	
	0002.AA	Draft Historical Records Review	Resolution of Army Comments on Draft
	0002.AB	Final Historical Records Review	Regulatory Approval
0003		<b>(OPTIONAL) Site Inspection CC-RVAAP-71 Barn No. 5 Petroleum Release</b>	
	0003.AA	Draft Site Inspection Work Plan	Resolution of Army Comments on Draft
	0003.AB	Final Site Inspection Work Plan	Regulatory Approval
	0003.AC	Field Completion Report	Army Acceptance of Data Submittal
	0003.AD	Draft Site Inspection Report	Resolution of Army Comments on Draft
	0003.AE	Final Site Inspection Report	Regulatory Approval
0004		<b>(OPTIONAL) Site Inspection CC-RVAAP-83 Former Buildings 1031 and 1039</b>	
	0004.AA	Draft Site Inspection Work Plan	Resolution of Army Comments on Draft
	0004.AB	Final Site Inspection Work Plan	Regulatory Approval
	0004.AC	Field Completion Report	Army Acceptance of Data Submittal
	0004.AD	Draft Site Inspection Report	Resolution of Army Comments on Draft
	0004.AE	Final Site Inspection Report	Regulatory Approval
0005		<b>Site Inspection CC-RVAAP-70, 72, 75, 77 CC-RVAAP-70 East Classification Yard, CC-RVAAP-72 Facility Wide Underground Storage Tanks, CC-RVAAP-75 George Road Sewage Treatment Plant, and CC-RVAAP-77 Building 1037 Laundry Waste Water Sump</b>	
	0005.AA	Draft Site Inspection Work Plan	Resolution of Army Comments on Draft
	0005.AB	Final Site Inspection Work Plan	Regulatory Approval
	0005.AC	Field Completion Report	Army Acceptance of Data Submittal
	0005.AD	Draft Site Inspection Report	Resolution of Army Comments on Draft
	0005.AE	Final Site Inspection Report	Regulatory Approval
0006		<b>Remedial Investigation CC-RVAAP-79 DLA Ore Storage Site - Main Ore Storage Yard</b>	
	0006.AA	Draft Remedial Investigation Work Plan	Resolution of Army Comments on Draft
	0006.AB	Final Remedial Investigation Work Plan	Regulatory Approval
	0006.AC	Field Completion Report	Army Acceptance of Data Submittal
	0006.AD	Draft Remedial Investigation Report	Resolution of Army Comments on Draft
	0006.AE	Final Remedial Investigation Report	Regulatory Approval
0007		<b>Feasibility Study CC-RVAAP-76 Depot Area</b>	
	0007.AA	Draft Remedial Investigation Work Plan	Resolution of Army Comments on Draft
	0007.AB	Final Remedial Investigation Work Plan	Regulatory Approval
	0007.AC	Field Completion Report	Army Acceptance of Data Submittal
	0007.AD	Draft Remedial Investigation Report	Resolution of Army Comments on Draft
	0007.AE	Final Remedial Investigation Report	Regulatory Approval
	0007.AF	Draft Feasibility Study Work Plan	Resolution of Army Comments on Draft
	0007.AG	Final Feasibility Study Work Plan	Regulatory Approval
	0007.AH	Field Completion Report	Army Acceptance of Data Submittal
	0007.AI	Draft Feasibility Study	Resolution of Army Comments on Draft
	0007.AJ	Final Feasibility Study	Regulatory Approval

**Milestone Payment Schedule  
Ravenna Army Ammunition Plant  
Environmental Investigation and Remediation  
14 Compliance Restoration Sites**

January 27, 2012

CLIN	Sub-CLIN	Tasks	Payment Metric
0008		<b>Remedial Investigation CC-RVAAP-68, 69, 73, 74, 78, AND 79</b>	
		<b>CC-RVAAP-68 Electrical Substation East, West, and West No. 3</b>	
		<b>CC-RVAAP-69 Building 1048 Fire Station, CC-RVAAP-73 Facility Wide Coal Storage</b>	
		<b>CC-RVAAP-74 Building 1034 Motor Pool Hydraulic Lift, CC-RVAAP-78 Quarry Pond Surface Dump</b>	
		<b>CC-RVAAP-79 DLA Ore Storage Sites - Remaining Ore Sites</b>	
	0008.AA	Draft Remedial Investigation Work Plan	Resolution of Army Comments on Draft
		CC-RVAAP-68 Electrical Substation East, West, and West No. 3	Resolution of Army Comments on Draft
		CC-RVAAP-69 Building 1048 Fire Station	Resolution of Army Comments on Draft
		CC-RVAAP-73 Facility Wide Coal Storage	Resolution of Army Comments on Draft
		CC-RVAAP-74 Building 1034 Motor Pool Hydraulic Lift	Resolution of Army Comments on Draft
		CC-RVAAP-78 Quarry Pond Surface Dump	Resolution of Army Comments on Draft
		CC-RVAAP-79 DLA Ore Storage Sites - Remaining Ore Sites	Resolution of Army Comments on Draft
	0008.AB	Final Remedial Investigation Work Plan	Regulatory Approval
		CC-RVAAP-68 Electrical Substation East, West, and West No. 3	Regulatory Approval
		CC-RVAAP-69 Building 1048 Fire Station	Regulatory Approval
		CC-RVAAP-73 Facility Wide Coal Storage	Regulatory Approval
		CC-RVAAP-74 Building 1034 Motor Pool Hydraulic Lift	Regulatory Approval
		CC-RVAAP-78 Quarry Pond Surface Dump	Regulatory Approval
		CC-RVAAP-79 DLA Ore Storage Sites - Remaining Ore Sites	Regulatory Approval
	0008.AC	Field Completion Report	Army Acceptance of Data Submittal
		CC-RVAAP-68 Electrical Substation East, West, and West No. 3	Army Acceptance of Data Submittal
		CC-RVAAP-69 Building 1048 Fire Station	Army Acceptance of Data Submittal
		CC-RVAAP-73 Facility Wide Coal Storage	Army Acceptance of Data Submittal
		CC-RVAAP-74 Building 1034 Motor Pool Hydraulic Lift	Army Acceptance of Data Submittal
		CC-RVAAP-78 Quarry Pond Surface Dump	Army Acceptance of Data Submittal
		CC-RVAAP-79 DLA Ore Storage Sites - Remaining Ore Sites	Army Acceptance of Data Submittal
	0008.AD	Draft Remedial Investigation Report	Resolution of Army Comments on Draft
		CC-RVAAP-68 Electrical Substation East, West, and West No. 3	Resolution of Army Comments on Draft
		CC-RVAAP-69 Building 1048 Fire Station	Resolution of Army Comments on Draft
		CC-RVAAP-73 Facility Wide Coal Storage	Resolution of Army Comments on Draft
		CC-RVAAP-74 Building 1034 Motor Pool Hydraulic Lift	Resolution of Army Comments on Draft
		CC-RVAAP-78 Quarry Pond Surface Dump	Resolution of Army Comments on Draft
		CC-RVAAP-79 DLA Ore Storage Sites - Remaining Ore Sites	Resolution of Army Comments on Draft
	0008.AE	Final Remedial Investigation Report	Regulatory Approval
		CC-RVAAP-68 Electrical Substation East, West, and West No. 3	Regulatory Approval
		CC-RVAAP-69 Building 1048 Fire Station	Regulatory Approval
		CC-RVAAP-73 Facility Wide Coal Storage	Regulatory Approval
		CC-RVAAP-74 Building 1034 Motor Pool Hydraulic Lift	Regulatory Approval
		CC-RVAAP-78 Quarry Pond Surface Dump	Regulatory Approval
		CC-RVAAP-79 DLA Ore Storage Sites - Remaining Ore Sites	Regulatory Approval
0009		<b>(OPTIONAL) Remedial Investigation CC-RVAAP-70</b>	
		<b>East Classification Yard</b>	
	0009.AA	Draft Remedial Investigation Work Plan	Resolution of Army Comments on Draft
	0009.AB	Final Remedial Investigation Work Plan	Regulatory Approval
	0009.AC	Field Completion Report	Army Acceptance of Data Submittal
	0009.AD	Draft Remedial Investigation Report	Resolution of Army Comments on Draft
	0009.AE	Final Remedial Investigation Report	Regulatory Approval
0010		<b>(OPTIONAL) Remedial Investigation CC-RVAAP-71</b>	
		<b>Barn No. 5 Petroleum Release</b>	
	00010.AA	Draft Remedial Investigation Work Plan	Resolution of Army Comments on Draft
	00010.AB	Final Remedial Investigation Work Plan	Regulatory Approval
	00010.AC	Field Completion Report	Army Acceptance of Data Submittal
	00010.AD	Draft Remedial Investigation Report	Resolution of Army Comments on Draft
	00010.AE	Final Remedial Investigation Report	Regulatory Approval

**Milestone Payment Schedule  
Ravenna Army Ammunition Plant  
Environmental Investigation and Remediation  
14 Compliance Restoration Sites**

January 27, 2012

CLIN	Sub-CLIN	Tasks	Payment Metric
0011		<b>(OPTIONAL) Remedial Investigation CC-RVAAP-72</b>	
		<b>Facility-Wide Underground Storage Tanks</b>	
	00011.AA	Draft Remedial Investigation Work Plan	Resolution of Army Comments on Draft
	00011.AB	Final Remedial Investigation Work Plan	Regulatory Approval
	00011.AC	Field Completion Report	Army Acceptance of Data Submittal
	00011.AD	Draft Remedial Investigation Report	Resolution of Army Comments on Draft
	00011.AE	Final Remedial Investigation Report	Regulatory Approval
0012		<b>(OPTIONAL) Remedial Investigation CC-RVAAP-75</b>	
		<b>George Road Sewage Treatment Plant</b>	
	00012.AA	Draft Remedial Investigation Work Plan	Resolution of Army Comments on Draft
	00012.AB	Final Remedial Investigation Work Plan	Regulatory Approval
	00012.AC	Field Completion Report	Army Acceptance of Data Submittal
	00012.AD	Draft Remedial Investigation Report	Resolution of Army Comments on Draft
	00012.AE	Final Remedial Investigation Report	Regulatory Approval
0013		<b>(OPTIONAL) Remedial Investigation CC-RVAAP-77</b>	
		<b>Building 1037 Laundry Waste Water Sump</b>	
	00013.AA	Draft Remedial Investigation Work Plan	Resolution of Army Comments on Draft
	00013.AB	Final Remedial Investigation Work Plan	Regulatory Approval
	00013.AC	Field Completion Report	Army Acceptance of Data Submittal
	00013.AD	Draft Remedial Investigation Report	Resolution of Army Comments on Draft
	00013.AE	Final Remedial Investigation Report	Regulatory Approval
0014		<b>(OPTIONAL) Remedial Investigation CC-RVAAP-80</b>	
		<b>Group 2 Propellant Can Tops</b>	
	00014.AA	Draft Remedial Investigation Work Plan	Resolution of Army Comments on Draft
	00014.AB	Final Remedial Investigation Work Plan	Regulatory Approval
	00014.AC	Field Completion Report	Army Acceptance of Data Submittal
	00014.AD	Draft Remedial Investigation Report	Resolution of Army Comments on Draft
	00014.AE	Final Remedial Investigation Report	Regulatory Approval
0015		<b>(OPTIONAL) Remedial Investigation CC-RVAAP-83</b>	
		<b>Former Buildings 1031 and 1039</b>	
	00015.AA	Draft Remedial Investigation Work Plan	Resolution of Army Comments on Draft
	00015.AB	Final Remedial Investigation Work Plan	Regulatory Approval
	00015.AC	Field Completion Report	Army Acceptance of Data Submittal
	00015.AD	Draft Remedial Investigation Report	Resolution of Army Comments on Draft
	00015.AE	Final Remedial Investigation Report	Regulatory Approval
0016		<b>Non-Time Critical Removal Action Inside Load Lines 1,2,3,4,12 for CC-RVAAP-73 AND 79</b>	
		<b>CC-RVAAP-73 Facility Wide Coal Storage Inside Load Lines 1,2,3,4</b>	
		<b>CC-RVAAP-79 DLA Ore Storage Sites Load Line 12</b>	
	00016.AA	Draft Non-Time Critical Removal Action Work Plan	Resolution of Army Comments on Draft
		CC-RVAAP-73 Facility Wide Coal Storage Inside Load Lines 1,2,3,4	Resolution of Army Comments on Draft
		CC-RVAAP-79 DLA Ore Storage Sites Load Line 12	Resolution of Army Comments on Draft
	00016.AB	Final Non-Time Critical Removal Action Work Plan	Regulatory Approval
		CC-RVAAP-73 Facility Wide Coal Storage Inside Load Lines 1,2,3,4	Regulatory Approval
		CC-RVAAP-79 DLA Ore Storage Sites Load Line 12	Regulatory Approval
	00016.AC	Field Completion Report	Army Acceptance of Data Submittal
		CC-RVAAP-73 Facility Wide Coal Storage Inside Load Lines 1,2,3,4	Army Acceptance of Data Submittal
		CC-RVAAP-79 DLA Ore Storage Sites Load Line 12	Army Acceptance of Data Submittal
	00016.AD	Draft Non-Time Critical Removal Action Report	Resolution of Army Comments on Draft
		CC-RVAAP-73 Facility Wide Coal Storage Inside Load Lines 1,2,3,4	Resolution of Army Comments on Draft
		CC-RVAAP-79 DLA Ore Storage Sites Load Line 12	Resolution of Army Comments on Draft
	00016.AE	Final Non-Time Critical Removal Action Report	Regulatory Approval
		CC-RVAAP-73 Facility Wide Coal Storage Inside Load Lines 1,2,3,4	Regulatory Approval
		CC-RVAAP-79 DLA Ore Storage Sites Load Line 12	Regulatory Approval

**Milestone Payment Schedule  
Ravenna Army Ammunition Plant  
Environmental Investigation and Remediation  
14 Compliance Restoration Sites**

January 27, 2012

CLIN	Sub-CLIN	Tasks	Payment Metric
0017		<b>Non-Time Critical Removal Action CC-RVAAP-79</b>	
		<b>DLA Ore Storage Sites - Main Ore Storage Yard</b>	
	00017.AA	Draft Non-Time Critical Removal Action Work Plan	Resolution of Army Comments on Draft
	00017.AB	Final Non-Time Critical Removal Action Work Plan	Regulatory Approval
	00017.AC	Field Completion Report	Army Acceptance of Data Submittal
	00017.AD	Draft Non-Time Critical Removal Action Report	Resolution of Army Comments on Draft
	00017.AE	Final Non-Time Critical Removal Action Report	Regulatory Approval
0018		<b>Non-Time Critical Removal Action CC-RVAAP-73, 74, 78, 79</b>	
		<b>CC-RVAAP-73 Facility Wide Coal Storage - Remaining Sites</b>	
		<b>CC-RVAAP-74 Building 1034 Motor Pool Hydraulic Lift</b>	
		<b>CC-RVAAP-78 Quarry Pond Surface Dump</b>	
		<b>CC-RVAAP-79 DLA Storage Sites - Remaining Sites</b>	
	00018.AA	Draft Non-Time Critical Removal Action Work Plan	Resolution of Army Comments on Draft
		CC-RVAAP-73 Facility Wide Coal Storage - Remaining Sites	Resolution of Army Comments on Draft
		CC-RVAAP-74 Building 1034 Motor Pool Hydraulic Lift	Resolution of Army Comments on Draft
		CC-RVAAP-78 Quarry Pond Surface Dump	Resolution of Army Comments on Draft
		CC-RVAAP-79 DLA Storage Sites - Remaining Sites	Resolution of Army Comments on Draft
	00018.AB	Final Non-Time Critical Removal Action Work Plan	Regulatory Approval
		CC-RVAAP-73 Facility Wide Coal Storage - Remaining Sites	Regulatory Approval
		CC-RVAAP-74 Building 1034 Motor Pool Hydraulic Lift	Regulatory Approval
		CC-RVAAP-78 Quarry Pond Surface Dump	Regulatory Approval
		CC-RVAAP-79 DLA Storage Sites - Remaining Sites	Regulatory Approval
	00018.AC	Field Completion Report	Army Acceptance of Data Submittal
		CC-RVAAP-73 Facility Wide Coal Storage - Remaining Sites	Army Acceptance of Data Submittal
		CC-RVAAP-74 Building 1034 Motor Pool Hydraulic Lift	Army Acceptance of Data Submittal
		CC-RVAAP-78 Quarry Pond Surface Dump	Army Acceptance of Data Submittal
		CC-RVAAP-79 DLA Storage Sites - Remaining Sites	Army Acceptance of Data Submittal
	00018.AD	Draft Non-Time Critical Removal Action Report	Resolution of Army Comments on Draft
		CC-RVAAP-73 Facility Wide Coal Storage - Remaining Sites	Resolution of Army Comments on Draft
		CC-RVAAP-74 Building 1034 Motor Pool Hydraulic Lift	Resolution of Army Comments on Draft
		CC-RVAAP-78 Quarry Pond Surface Dump	Resolution of Army Comments on Draft
		CC-RVAAP-79 DLA Storage Sites - Remaining Sites	Resolution of Army Comments on Draft
	00018.AE	Final Non-Time Critical Removal Action Report	Regulatory Approval
		CC-RVAAP-73 Facility Wide Coal Storage - Remaining Sites	Regulatory Approval
		CC-RVAAP-74 Building 1034 Motor Pool Hydraulic Lift	Regulatory Approval
		CC-RVAAP-78 Quarry Pond Surface Dump	Regulatory Approval
		CC-RVAAP-79 DLA Storage Sites - Remaining Sites	Regulatory Approval
0019		<b>(OPTIONAL) Non-Time Critical Removal Action CC-RVAAP-72</b>	
		<b>Facility Wide Underground Storage Tanks</b>	
	00019.AA	Draft Non-Time Critical Removal Action Work Plan	Resolution of Army Comments on Draft
	00019.AB	Final Non-Time Critical Removal Action Work Plan	Regulatory Approval
	00019.AC	Field Completion Report	Army Acceptance of Data Submittal
	00019.AD	Draft Non-Time Critical Removal Action Report	Resolution of Army Comments on Draft
	00019.AE	Final Non-Time Critical Removal Action Report	Regulatory Approval
0020		<b>(OPTIONAL) Non-Time Critical Removal Action CC-RVAAP-75</b>	
		<b>George Road Sewerage Treatment Plant</b>	
	00020.AA	Draft Non-Time Critical Removal Action Work Plan	Resolution of Army Comments on Draft
	00020.AB	Final Non-Time Critical Removal Action Work Plan	Regulatory Approval
	00020.AC	Field Completion Report	Army Acceptance of Data Submittal
	00020.AD	Draft Non-Time Critical Removal Action Report	Resolution of Army Comments on Draft
	00020.AE	Final Non-Time Critical Removal Action Report	Regulatory Approval
0021	00021.AA	<b>For all remedies, optimize capital, and long-term costs</b>	



**APPENDIX C**

**COMMUNICATION PLAN**

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<b>Environmental Investigation and Remediation Services - 14 Compliance Restoration Sites</b>
<b>Ravenna Army Ammunition Plant</b>
AI Easterday
US Army Corps of Engineers, Louisville

Date  
Revision #  
Project #

27-Jan-12
0
5161.004

**COMMUNICATION PLAN**

#	Communications Item	USACE CORs - Chris Kareem, Shelton Poole	USACE Contract Specialist - Stephanie Craig	USACE Project Manager - Glen Beckham	USACE Task Manager - Eric Cheng	USACE Task Manager - T. Scott Kelly	Senior PM - AI Easterday	Assistant PM - Nick Picardo	H&S/QC Manager - Mike McSherry, CIH, CSP	Chemist - Jackson Kiker, CHMM	Sr. Sci - John Jent, PE (Prudent)	Sr. Hydrogeologist - Michael Goydas, PG	Sr. Geologist - Bruce Baker, CPG, PG (AMEC)	Site Safety & Health Officer - Jeff Donovan	Risk Accessor - Deborah Barsotti, PhD (AMEC)	USAEC Site Lead - Mark Eldridge	BRAC Program Manager - William O'Donnell	RVAAP Facility Manager - Mark Patterson	NGB Cleanup Program Manager - Kim Harriz	OHARNG Environmental Specialist - Katie Tait	Ohio EPA Facility Coordinator - Eileen Mohr	Ohio EPA Site Coordinator - Kevin Palombo	RAB	When	How	
1	Project Schedule	R	I	R	R	R	A	C	I	I	C	I	C	C	I	I	I	I	I	I	I	I	I	-	Preliminary Draft, Draft, Final	Email, HC, & EC
2	Project Management Plan	R	I	R	R	R	A	C	I	I	C	I	C	C	I	I	I	I	I	I	R	R	-	Preliminary Draft, Draft, Final	Email, HC, & EC	
3	Quality Assurance Surveillance Plan	R	-	R	R	R	A	C	C	C	C	C	C	C	I	I	I	I	I	I	I	I	-	Preliminary Draft, Draft, Final	Email, HC, & EC	
4	Communications Plan	R	-	R	R	R	A	C	I	I	I	I	I	I	I	I	I	I	I	I	I	I	-	Preliminary Draft, Draft, Final	Email, HC, & EC	
5	Health and Safety Plan Addendum	R	-	R	R	R	A	C	R	I	I	I	I	C	I	I	I	I	I	I	R	-	Preliminary Draft, Draft, Final	Email, HC, & EC		
6	QAPP Addendum	R	-	R	R	R	A	C	C	C	C	C	C	C	C	C	I	I	I	I	R	R	-	Preliminary Draft, Draft, Final	Email, HC, & EC	
7	Work Plans/Reports/Studies	R	-	R	R	R	A	C	C	C	C	C	C	C	C	I	I	I	I	I	R	R	-	Preliminary Draft, Draft, Final	Email, HC, & EC	
8	Project Meeting Agendas	R	-	R	R	R	A	C	I	I	C	I	C	I	I	I	I	I	I	I	I	I	I	1 week prior to mgt	Email	
9	Project Meeting Notes	R	-	R	R	R	A	C	I	I	R	I	I	I	I	R*	R*	R*	R*	R*	R*	R*	I	2 weeks after mgt	Email	
10	Monthly Progress Reports	R	-	R	R	R	A	C	I	I	I	I	I	I	I	I	I	I	I	I	I	I	-	as needed	Phone/Email	
11	Teleconferences	R	-	R	R	R	A	C	I	I	C	I	I	I	I	I	I	I	I	I	I	I	-	bi-weekly	Phone	

Legend:	
<b>R</b>	Review/Approve Document
<b>A</b>	Accountable for Preparation
<b>C</b>	Consult on Preparation
<b>I</b>	Inform/Participate

\* Note: Regulators, RVAAP and USAEC will receive project meeting notes where they are involved.  
EC = Electronic copy  
HC = Hard copy

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**APPENDIX D**

**CORRESPONDENCE  
AND  
COMMENT RESPONSE TABLE**

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**Environmental  
Protection Agency**

John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Scott J. Nally, Director

January 3, 2012

RE: RAVENNA ARMY AMMUNITION PLANT  
PORTAGE/TRUMBULL COUNTIES  
DRAFT PROJECT MANAGEMENT PLAN  
FOR 14 COMPLIANCE RESTORATION  
SITES (ID # 267000859162)

Mr. Mark Patterson, Facility Manager  
Ravenna Army Ammunition Plant  
8451 State Route 5  
Ravenna, OH 44266

**CERTIFIED MAIL**  
**7010 3090 0000 3936 6344**

Dear Mr. Patterson:

The Ohio Environmental Protection Agency (Ohio EPA) has received and reviewed the document entitled: Draft Project Management Plan, 2011 PBA Environmental Investigation and Remediation at 14 Compliance Restoration Sites, Ravenna Army Ammunition Plant, Ravenna, Ohio. This document, dated November 17, 2011 and received on November 18, 2011 at Ohio EPA, was prepared for the U.S. Army Corps of Engineers (USACE) - Louisville District, by ECC, under contract number W912QR-04-D-0039.

This document was reviewed by personnel from Ohio EPA's Division of Environmental Response and Revitalization (DERR). Ohio EPA's comments are enclosed with this letter.

If you have any questions regarding this correspondence, please do not hesitate to contact me at (330) 963-1292.

Sincerely,

Kevin Palombo, Project Coordinator  
Division of Environmental Response and Revitalization  
kevin.palombo@epa.ohio.gov

KP/kss

enclosure

cc: Eileen Mohr, Ohio EPA, NEDO, DERR

ec: Katie Tait, Camp Ravenna  
Derek Kinder, USACE, Louisville  
Glen Beckham, USACE, Louisville  
Thomas Chanda, USACE, Louisville  
Nancy Zikmanis, Ohio EPA, NEDO, DERR  
Todd Fisher, Ohio EPA, NEDO, DERR  
Bob Guthrie, Comcast

Al Easterday, ECC  
Mark Eldridge, AEC  
Eric Cheng, USACE, Louisville  
Mark Nichter, USACE, Louisville  
LTC Ed Meade, Camp Ravenna  
Christy Esler, VISTA

**COMMENT RESOLUTION TABLE**

**Draft Project Management Plan, 2011 PBA Environmental Investigation and Remediation  
at 14 Compliance Restoration Sites  
Ravenna Army Ammunition Plant  
Dated: November 17, 2011**

<b>Comment Number</b>	<b>Page or Sheet</b>	<b>Comment</b>	<b>Recommendation</b>	<b>Response</b>
<i>Ohio EPA (K. Palombo)</i>				
O-1.	Report Documentation Page, Line 4. Title and Subtitle	The word "Investigation" was omitted from the title.	Line 2 of the title should read, "2011 PBA Environmental Investigation and Remediation at 14 Compliance Restoration Sites.	
O-2.	Page iii Acronyms and Abbreviations	First line of Acronyms ACM, spelling of "asbestos."	Correct spelling of 'Asbestos.'	
O-3.	Page i, line 138	Table of Contents, Section 7.0, Record Management should read, "Records" Management.	Make spelling change, "Record" to "Records."	
O-4.	Page ii, Table of Contents, line 144, Section 8.1 and page 41, Section 8.1, line 1203	Section 8.1, title reads, "Government Furnished Resources" in the TOC and "Army Furnished Resources" on page 41.	Correct the inconsistency.	



COMMENT RESOLUTION TABLE

DRAFT PROJECT MANAGEMENT PLAN, 2011 PBA ENVIRONMENTAL INVESTIGATION AND REMEDIATION

AT 14 COMPLIANCE RESTORATION SITES

RAVENNA ARMY AMMUNITION PLANT

DATED: NOVEMBER 17, 2011

PAGE 2

<b>Comment Number</b>	<b>Page or Sheet</b>	<b>Comment</b>	<b>Recommendation</b>	<b>Response</b>
O-5.	Page ii, Table of Contents	The list of Tables and Figures in the Table of Contents should provide page numbers.	Provide page numbers for Figures and Tables.	
O-6.	General	Tables 1-1 and 1-2 are located in a "tabbed" section following the text and Figures 2-1 and 3-1 are included in the text. All Tables are located within the text.	For consistency, Ohio EPA recommends including Figures 1-1 and 1-2 within the text.	
O-7.	Figures Tab. Figure 1-2	Figure 1-2 does not have a scale.	Provide a scale on Figure 1-2.	
O-8.	Page 14, line 559	Spelling of the word, "Containment."	Make the spelling change.	
O-9.	Page 8, line 333	Describes sections of the Project Management Plan. Section 2.0 is titled Project Management "Team." The actual	Stay consistent with the PMP title for Section 2.0. Change line 333 to read, "Project Management Organization."	

COMMENT RESOLUTION TABLE

DRAFT PROJECT MANAGEMENT PLAN, 2011 PBA ENVIRONMENTAL INVESTIGATION AND REMEDIATION

AT 14 COMPLIANCE RESTORATION SITES

RAVENNA ARMY AMMUNITION PLANT

DATED: NOVEMBER 17, 2011

PAGE 3

<b>Comment Number</b>	<b>Page or Sheet</b>	<b>Comment</b>	<b>Recommendation</b>	<b>Response</b>
		PMP title for Section 2.0 is Project Management "Organization."		
O-10.	Page 9, line 375	The section describing CC-RVAAP-70 East Classification Yard does not provide information on historical spills or potential releases.	Provide info on historic spills or potential releases from the East Classification Yard.	
O-11.	Page 14, line 564	Site Related Constituents (SRC)	Include this acronym (SRC) in the Acronyms and Abbreviations list.	
O-12.	Page 34, line 1003	Electronic Data Deliverable (EDD)	Include this acronym in the Acronym and Abbreviation List	
O-13.	Page 34, line 1029	Reference to UTM coordinate system datum WGS84 is unclear.	Provide a clarifying or descriptive sentence describing what the WGS84 datum refers to.	

COMMENT RESOLUTION TABLE

DRAFT PROJECT MANAGEMENT PLAN, 2011 PBA ENVIRONMENTAL INVESTIGATION AND REMEDIATION

AT 14 COMPLIANCE RESTORATION SITES

RAVENNA ARMY AMMUNITION PLANT

DATED: NOVEMBER 17, 2011

PAGE 4

<b>Comment Number</b>	<b>Page or Sheet</b>	<b>Comment</b>	<b>Recommendation</b>	<b>Response</b>
O-14.	Page 37, line 1061	Accident Prevention Plan (APP)	Include this acronym in the Acronym and Abbreviation List.	

**From:** "Tait, Kathryn S Ms CIV NG OHARNG" <kathryn.s.tait@us.army.mil>  
**To:** AEasterday@ecc.net  
**CC:** Kevin.Palombo@epa.state.oh.us; Timothy.S.Kelly@usace.army.mil; Mark.W.Ni...  
**Date:** 1/12/2012 8:36 AM  
**Subject:** RE: ECC Response to Comments - Draft PMP (UNCLASSIFIED)

Classification: UNCLASSIFIED  
Caveats: FOUO

AI:  
I have reviewed the comment responses. Comment responses are acceptable. Please note for OHARNG comment number 7, that the incorporation of findings from the SAIC HRR report into the ECC work will be discussed during the work plan comment resolution as it also relates to comments on that document. We will need to discuss how the recommendations from the HRR report (which is final and approved) will be incorporated into your work. Thanks.

Katie Tait  
Environmental Specialist 2  
Ohio Army National Guard  
(614)336-6136  
kathryn.s.tait@us.army.mil

-----Original Message-----

From: AI Easterday [mailto:AEasterday@ecc.net]  
Sent: Wednesday, January 11, 2012 8:01 AM  
To: kevin.palombo@epa.ohio.gov; Tait, Kathryn S Ms CIV NG OHARNG  
Cc: Gina Calderone; Nicholas Picardo; Eileen' 'Mohr; Mark Patterson; Eric Cheng; Glen LRL Beckham; Mark Nichter; Scott Kelly  
Subject: ECC Response to Comments - Draft PMP

Katie and Kevin -

Attached please find ECC's Comment Response Table (CRT) for your review and concurrence.

If you have any questions, please contact me.

Regards,

AI Easterday  
Sr. Project Manager  
ECC  
33 Boston Post Road West  
Suite 340  
Marlborough, Massachusetts 01752  
Phone (508) 229-2270  
Fax (508) 229-7737  
Cell (508) 726-0284

Classification: UNCLASSIFIED  
Caveats: FOUO

**From:** "Palombo, Kevin" <Kevin.Palombo@epa.state.oh.us>  
**To:** "aeasterday@ecc.net" <aeasterday@ecc.net>, "Mohr, Eileen" <eileen.mohr@e...>  
**Date:** 1/17/2012 8:07 AM  
**Subject:** Draft PMP for CRS Comment Response Table

Morning Al:

I reviewed your responses to our comments on the PMP for the 14 Compliance Restoration Sites and have no further questions. Your responses are acceptable. Please finalize the document.

Thanks  
Kevin

Kevin M. Palombo, Site Coordinator

Ohio EPA I Division of Environmental Response and Revitalization  
Northeast District Office  
2110 E. Aurora Road  
Twinsburg, OH 44087  
330-963-1292  
Fax 330-487-0769  
kevin.palombo@epa.ohio.gov



**Environmental  
Protection Agency**

John R. Kasich, Governor

Mary Taylor, Lt. Governor

Scott J. Nally, Director

February 21, 2012

RE: RVAAP-SITEMG- 267000859059  
RAVENNA ARMY AMMUNITION PLANT,  
PORTAGE/TRUMBULL COUNTIES,  
FINAL PROJECT MANAGEMENT PLAN  
COMPLIANCE RESTORATION SITES  
(14 AREAS OF CONCERN)

Mr. Mark Patterson  
Installation Manager  
Ravenna Army Ammunition Plant  
8451 State Route 5  
Ravenna, OH 44266

**CERTIFIED MAIL**  
**7010 3090 0000 3936 6207**

**NOTE TO OHRANG: Please forward to NGB as needed/required.**

Dear Mr. Patterson:

The Ohio Environmental Protection Agency (Ohio EPA) has received and reviewed the "Final Project Management Plan, 2011 PBA Environmental Investigation and Remediation at Compliance Restoration Sites (14 Areas of Concern) Ravenna Army Ammunition Plant, Ravenna, Ohio." The final document was received at Ohio EPA, Northeast District Office (NEDO), Division of Environmental Response and Revitalization (DERR), on January 30, 2012. The document was prepared for the U.S. Army Corps of Engineers (USACE) – Louisville District, by ECC, under Contract Number W912QR-04-D-0039, Delivery Order 0004.

Pursuant to the CERCLA process, the property owner usually can provide the expected land uses to assist in ensuring that the investigation addresses all receptors for both current and future land uses. Be advised that due to land use uncertainty, Ohio EPA may require additional work in the future, to address data gaps. It is incumbent upon the Army to finalize land use at Camp Ravenna as soon as possible, otherwise additional work and schedule slippage may result.

This document was reviewed by personnel from Ohio EPA's Division of Environmental Response and Revitalization (DERR). Ohio EPA has determined that all required text changes have been made to this document and considers it to be final and approved, providing there are no additional comments from the Army or Ohio Army National Guard.

MR. MARK PATTERSON  
RAVENNA ARMY AMMUNITION PLANT  
FEBRUARY 21, 2012  
PAGE 2

If you have any questions, please call me at (330) 963-1292.

Sincerely,



Kevin Palombo  
Project Coordinator  
Division of Environmental Response and Revitalization

KP/kss

cc: Eileen Mohr, Ohio EPA, NEDO, DERR

ec: Katie Tait, OHARNG RTLS  
LTC Ed Meade, OHARNG RTLS  
Glen Beckham, USACE Louisville  
Mark Nichter, USACE Louisville  
Nancy Zikmanis, Ohio EPA, NEDO, DERR  
Mark Eldridge, AEC  
Kim Harriz, NGB  
Al Easterday, ECC  
Todd Fisher, Ohio EPA, NEDO, DERR  
Christy Esler, VISTA  
Tom Chanda, USACE Louisville  
Eric Cheng, USACE Louisville  
Bob Guthrie, Management Solutions, LLC

**DRAFT PROJECT MANAGEMENT PLAN  
2011 PERFORMANCE-BASED ACQUISITION ENVIRONMENTAL INVESTIGATION AND REMEDIATION  
AT 14 COMPLIANCE RESTORATION SITES  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA OHIO  
COMMENT RESPONSE TABLE  
ECC PROJECT MANAGEMENT PLAN - Submitted 17 November 2011  
OHARNG Comments – Received 1 December 2011  
Ohio EPA Comments – Received 3 January 2012**

<b>Comment Number</b>	<b>Page No. / Line No.</b>	<b>New Page or Sheet</b>	<b>Comment</b>	<b>Recommendation</b>	<b>Response</b>
<i>Ohio EPA (Kevin Palombo)</i>					
O-1	Report Documentation Page, Line 4. Title and Subtitle		The word “Investigation” was omitted from the title.	Line 2 of the title should read, “2011 PBA Environmental Investigation and Remediation at 14 Compliance Restoration Sites.	The title in Block 4 of Form 298 will be revised as noted in the comment.
O-2	Page iii Acronyms and Abbreviations		First line of Acronyms ACM, spelling of “asbestos.”	Correct spelling of ‘Asbestos.’	The spelling will be corrected.
O-3	Page i, line 138		Table of Contents, Section 7.0, Record Management should read, “Records” Management.	Make spelling change, “Record” to “Records.”	The recommendation as noted in the comment will be made to the Table of Contents (TOC), Section 7.0 title.
O-4	Page ii , Table of Contents, line 144, Section 8.1 and page 41, Section 8.1, line 1203		Section 8.1, title reads, “Government Furnished Resources” in the TOC and “Army Furnished Resources” on page 41.	Correct the inconsistency.	The TOC, Section 8.1 title will be revised to “Army-Furnished Resources”. Note that TOC Section 8.2 title will be changed to “Contractor-Furnished Resources”.
O-5	Page ii, Table of Contents		The list of Tables and Figures in the Table of Contents should provide page numbers.	Provide page numbers for Figures and Tables.	Page numbers will be provided for Figures and Tables in the TOC.
O-6	General		Tables 1-1 and 1-2 are located in a “tabbed” section following the	For consistency, Ohio EPA recommends including Figures 1-1	Figures 1-1 and 1-2 will be inserted into Section 1.0 Introduction of the Project



**DRAFT PROJECT MANAGEMENT PLAN  
2011 PERFORMANCE-BASED ACQUISITION ENVIRONMENTAL INVESTIGATION AND REMEDIATION  
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Ohio EPA Comments – Received 3 January 2012**

Comment Number	Page No. / Line No.	New Page or Sheet	Comment	Recommendation	Response
			text and Figures 2-1 and 3-1 are included in the text. All Tables are located within the text.	and 1-2 within the text.	Management Plan.
O-7	Figures Tab. Figure 1-2		Figure 1-2 does not have a scale.	Provide a scale on Figure 1-2.	A scale will be provided in Figure 1-2.
O-8	Page 14, line 559		Spelling of the word, "Containment."	Make the spelling change.	The spelling will be corrected.
O-9	Page 8, line 333		Describes sections of the Project Management Plan. Section 2.0 is titled Project Management "Team." The actual PMP title for Section 2.0 is Project Management "Organization."	Stay consistent with the PMP title for Section 2.0. Change line 333 to read, "Project Management Organization."	The second bullet in Section 1.4 Project Management Plan Organization will be revised as follows:  " <i>Section 2.0 – Project Management <del>Team</del> <u>Organization</u> "</i>
O-10	Page 9, line 375		The section describing CC-RVAAP-70 East Classification Yard does not provide information on historical spills or potential releases.	Provide info on historic spills or potential releases from the East Classification Yard.	The text within CC-RVAAP-70 East Classification Yard section will be revised as follows:  " <i>The Ravenna facility was originally equipped with east and west classification yards during the facility's early operational years. The classification yards were used for the switching and maintenance of railroad cars <u>and locomotives</u>. The east classification yard is located east of Load Line 1 and the</i>

**DRAFT PROJECT MANAGEMENT PLAN  
2011 PERFORMANCE-BASED ACQUISITION ENVIRONMENTAL INVESTIGATION AND REMEDIATION  
AT 14 COMPLIANCE RESTORATION SITES  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA OHIO  
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Comment Number	Page No. / Line No.	New Page or Sheet	Comment	Recommendation	Response
					<p><i>Main Defense Logistics Agency (DLA) Ore Storage Area in close proximity to the intersection of Ramsdell Road and Irons Road. The <del>rail</del> east classification yard <u>Areas of Concern</u> <del>reportedly</del> consists of 18 tracks with a 750 ear capacity, and 3 Hi X tracks with a 120 ear capacity, which also included the Building 47-40 (Round House, still exists but is not actively used), the former herbicide storage shed (former Building 47-60), the containment area for former AST (documented spill of No. 5 fuel oil occurred within the containment area in 1986), and an outdoor open wash rack south of the East Classification Yard (north of Butts-Kistler Road) <del>main track area</del>. This yard was equipped with a locomotive repair building (Round House) and a herbicide storage shed along Tracks # 47 and 48. A railroad track complex is located east of the CR site and is currently utilized by the <u>OHARNG</u>.</i></p>
O-11	Page 14, line 564		Site Related Constituents (SRC)	Include this acronym (SRC) in the Acronyms and Abbreviations list.	The acronym “SRC” will be added to the Acronyms and Abbreviations list.
O-12	Page 34, line		Electronic Data Deliverable	Include this acronym in the Acronym	The acronym “EDD” will be included in

**DRAFT PROJECT MANAGEMENT PLAN  
2011 PERFORMANCE-BASED ACQUISITION ENVIRONMENTAL INVESTIGATION AND REMEDIATION  
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OHARNG Comments – Received 1 December 2011  
Ohio EPA Comments – Received 3 January 2012**

Comment Number	Page No. / Line No.	New Page or Sheet	Comment	Recommendation	Response
	1003		(EDD)	and Abbreviation List	the Acronyms and Abbreviations list.
O-13	Page 34, line 1029		Reference to UTM coordinate system datum WGS84 is unclear.	Provide a clarifying or descriptive sentence describing what the WGS84 datum refers to.	<p>The following sentences will be added after the eighth sentence in Section 5.2:</p> <p><i>“ Datum WGS84 is the World Geodetic System (WGS) of 1984 and it is the reference frame used by the U.S. Department of Defense (DoD) and is defined by the National Geospatial-Intelligence Agency (NGA). WGS84 is used by DoD for all its mapping, charting, surveying, and navigation needs, including its GPS "broadcast" and "precise" orbits. ”</i></p> <p>The following acronyms will be added to the Acronyms and Abbreviations list; WGS, DOD, NGA, and GPS.</p>
O-14	Page 9, line 375		Accident Prevention Plan (APP)	Include this acronym in the Acronym and Abbreviation List.	The acronym “APP” will be included in the Acronyms and Abbreviations list.
<i>Ohio Army National Guard (Katie Tait)</i>					
1	Pg 3, Line 254		“...BRACD that has, among other responsibilities, the task of overseeing inactive status installation.”		<p>The referenced sentence will be revised as follows:</p> <p><i>“ These 1,280 acres consist of former industrial facilities that are being</i></p>

**DRAFT PROJECT MANAGEMENT PLAN  
2011 PERFORMANCE-BASED ACQUISITION ENVIRONMENTAL INVESTIGATION AND REMEDIATION  
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ECC PROJECT MANAGEMENT PLAN - Submitted 17 November 2011  
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Comment Number	Page No. / Line No.	New Page or Sheet	Comment	Recommendation	Response
			While this statement is true of BRACD, recommend deleting it as it implies that this installation is not actively used which is incorrect. Please delete this portion (above) from the sentence.		<i>remediated and managed by the Base Realignment and Closure Division (BRACD) <del>that has, among other responsibilities, the task of overseeing inactive status installations.</del></i> “
2	Pg 8, Line 353		Change ‘Building 28’ to ‘Building 28-28’.		The sentence will be revised as follows:  “ <i>The west electrical substation comprises an area of approximately 3,000 square ft., which includes the land around Building 28-28 and the surrounding land formerly used as....</i> ”
3	Pg 9, Line 366		Insert ‘former’ prior to ‘Plant’.		The sentence will be revised as follows:  “ <i>The fire station was located in the <u>former</u> Plant Administration Area in....</i> ”
4	Pg 9, Line 372		“The area of potential impact includes the ground surface behind the former building location.” Please be clear in this statement and Section, that the area to be investigated (the AOC), is the area north/northwest of the former building location, not the former		The last sentence for CC-RVAAP-69 Building 1048 Fire Station will be revised as follows:  “ <i>The area of potential impact <u>at this AOC</u> includes the ground surface, <u>located to the north – northwest of</u> <del>behind</del> the former building location.</i> ”

**DRAFT PROJECT MANAGEMENT PLAN  
2011 PERFORMANCE-BASED ACQUISITION ENVIRONMENTAL INVESTIGATION AND REMEDIATION  
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ECC PROJECT MANAGEMENT PLAN - Submitted 17 November 2011  
OHARNG Comments – Received 1 December 2011  
Ohio EPA Comments – Received 3 January 2012**

Comment Number	Page No. / Line No.	New Page or Sheet	Comment	Recommendation	Response
			building footprint.		
5	Pg 9, Line 375-384, East Classification Yard		It needs to be clear in this description what areas are included in the classification yard AOC. This is especially important because the tracks (east of the buildings) are still utilized by the OHARNG and are not part of the AOC.		<p>Please note that this referenced text, in Section 1.5 Compliance Restoration Sites Operational History/Description, is intended to provide a brief description of the CR site and its history. Based on the Draft HRR Report issued on 3 October 2011, ECC will revised the text within CC-RVAAP-70 East Classification Yard section as follows:</p> <p><i>“ The Ravenna facility was originally equipped with east and west classification yards during the facility’s early operational years. The classification yards were used for the switching and maintenance of railroad cars <u>and locomotives</u>. The east classification yard is located east of Load Line 1 and the Main Defense Logistics Agency (DLA) Ore Storage Area in close proximity to the intersection of Ramsdell Road and Irons Road. The <del>east</del> east classification yard <u>Areas of Concern</u> <del>reportedly</del> consists of 18 tracks with a 750 ear capacity, and 3 Hi X tracks with a 120 ear capacity, which also included the</i></p>

**DRAFT PROJECT MANAGEMENT PLAN  
2011 PERFORMANCE-BASED ACQUISITION ENVIRONMENTAL INVESTIGATION AND REMEDIATION  
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Comment Number	Page No. / Line No.	New Page or Sheet	Comment	Recommendation	Response
					<p><i>Building 47-40 (Round House, still exists but is not actively used), the former herbicide storage shed (former Building 47-60), the containment area for former AST (documented spill of No. 5 fuel oil occurred within the containment area in 1986), and <u>an outdoor open</u> wash rack south of the East Classification Yard (north of Butts-Kistler Road) <del>main track</del> area. This yard was equipped with a locomotive repair building (Round House) and a herbicide storage shed along Tracks # 47 and 48. A railroad track complex is located east of the CR site and is currently utilized by the <u>OHARNG.</u></i></p>
6	Pg 9, Line 391		<p>“The OHARNG future land use designation is Training Area D.”  Why is this included when no other AOC descriptions include end use. Please delete.</p>		<p>The following sentence will be deleted from this section:  “ <i>The OHARNG future land use designation is Training Area D.</i> ”</p>
7	General – FW USTs and FW Coal Storage Sites		<p>In general throughout this project, we need to incorporate and be cognizant of the previous work that was already conducted by SAIC. SAIC recommended</p>		<p>ECC is aware of previous work at CC-RVAAP-72 and CC-RVAAP-73, as well as other sites at RVAAP by other contractors. ECC works with our assigned USACE technical representative to</p>

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			No Further Action for 43 of 58 UST sites and 15 of the coal storage sites.		obtain previous reports, data, and other information generated by other contractors or the USACE at the sites ECC is responsible for under the 2011 PBA Contract.
8	Pg 14, Line 567		<p>“Potential SRCs for the sanitary sewer system at the former Hospital Building are VOCs, SVOCs, and TAL metals.”</p> <p>How is the facility-wide sewer system information being tied into this as those lines have already been investigated by SAIC?</p>		ECC was recently made aware of SAIC’s facility-wide sewer remedial investigation report. Our understanding is that this report is in Preliminary Draft stage. Once ECC receives a copy of this report, the information will be incorporated into the Historical Records Review (HRR) Report for CC-RVAAP-83 and other sites, as appropriate.
9	Pg 14, Line 568		<p>“Asbestos-containing material (ACM) was also mentioned as a potential SRC during the site visit.”</p> <p>Why is asbestos a potential SRC for this site? All ACM was properly removed prior to building demolition activities. Therefore, I think it can be addressed in the RI by stating that it was properly removed and that there is no visual evidence</p>		<p>The following sentence will be deleted from this section:</p> <p><i>“ Asbestos Containing Material (ACM) was also mentioned as a potential SRC during the site visit. ”</i></p>

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			of dumping or asbestos at the site; but it should not be a specific SRC just because the building once contained asbestos. Please delete this statement. Will be addressed in the RI as indicated above.		
10	Section 3.0 Project Coordination		Please also include a subsection stating that ECC will also coordinate access with the OHARNG as some most of the sites are on OHARNG property and some are used for training purposes.		Subsection 3.5 entitled “Ohio Army National Guard” will be added to the PMP. The following text will be inserted into Section 3.5:  “ <u>ECC will coordinate all site access with the Ohio Army National Guard.</u> ”