

**Final**

**Project Management Plan for the  
2010 Phase I Remedial Investigation Services at  
Compliance Restoration Sites (9 Areas of Concern)  
Revision 0**

**Ravenna Army Ammunition Plant  
Ravenna, Ohio**

**Contract No. W912QR-08-D-0008  
Delivery Order No. 0019**

**Prepared for:**



**US Army Corps  
of Engineers®**

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

**Prepared by:**



**Science Applications International Corporation  
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**September 10, 2010**

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14. ABSTRACT This Project Management Plan (PMP) describes SAIC's approach to executing this project and meeting the requirements of the Scope of Work dated January 19, 2010. 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.					
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Ravenna, Ohio

Contract No. W912QR-08-D-0008  
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**Prepared for:**

U.S. Army Corps of Engineers  
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Twinsburg, Ohio 44087

September 10, 2010

**CONTRACTOR STATEMENT OF INDEPENDENT TECHNICAL REVIEW**

Science Applications International Corporation (SAIC) has completed the Final Project Management Plan for the 2010 Phase I Remedial Investigation Services at Compliance Restoration Sites (9 Areas of Concern) at the 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 the project. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of data quality objectives; technical assumptions; methods, procedures, and materials to be used; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing USACE policy.



\_\_\_\_\_  
Corey Pacer, P.E.  
Study/Design Team Leader

09.09.10  
Date

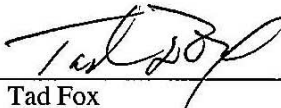


\_\_\_\_\_  
W. Kevin Jago, P.G.  
Independent Technical Review Team Leader

9-9-10  
Date

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

Internal SAIC Independent Technical Review comments are recorded on a Document Review Record per SAIC quality assurance procedure QAAP 3.1. This Document Review Record is maintained in the project file. Changes to the report addressing the comments have been verified by the Study/Design Team Leader. As noted above, all concerns resulting from independent technical review of the project have been considered.



\_\_\_\_\_  
Tad Fox  
Principal w/ A-E firm

10 Sept 2010  
Date

**DOCUMENT DISTRIBUTION**  
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**for the 2010 Phase I Remedial Investigation Services at Compliance Restoration Sites**  
**(9 Areas of Concern)**  
**Revision 0**  
**Ravenna Army Ammunition Plant**  
**Ravenna, Ohio**

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Ohio EPA – NEDO = Ohio Environmental Protection Agency Northeast District Office  
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USACE = United States Army Corps of Engineers  
REIMS = Ravenna Environmental Information Management System  
SAIC = Science Applications International Corporation

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## ACRONYMS AND ABBREVIATIONS

AOC	Area of Concern
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
Camp Ravenna	Camp Ravenna Joint Military Training Center
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIH	Certified Industrial Hygienist
COR	Contracting Officer Representative
CR	Compliance Restoration
CRF	Central Records Facility
CSP	Certified Safety Professional
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
EM	Engineering Manual
EPA	Environmental Protection Agency
FWSHP	Facility-Wide Safety and Health Plan
HTRW	Hazardous, Toxic, or Radioactive Waste
IRP	Installation Restoration Program
km	kilometer
LL #2	Load Line 2
LL #6	Load Line 6
LL #12	Load Line 12
MC	Munitions Constituent
MD	Munitions Debris
MEC	Munitions and Explosives of Concern
MMRP	Military Munitions Response Program
MRS	Munitions Response Site
N	North
NCP	National Contingency Plan
NE	Northeast
NEDO	Northeast District Office
NGB	National Guard Bureau



## ACRONYMS AND ABBREVIATIONS (CONTINUED)

NPDES	National Pollutant Discharge Elimination System
OFFO	Office of Federal Facilities Oversight
OHARNG	Ohio Army National Guard
Ohio EPA	Ohio Environmental Protection Agency
PE	Professional Engineer
PG	Professional Geologist
PH	Powerhouse
PM	Professional Engineer
PMP	Project Management Plan
PPE	Personal Protective Equipment
QA/QC	Quality Assurance/Quality Control
QCP	Quality Control Plan
RAB	Restoration Advisory Board
REIMS	RVAAP Environmental Information Management System
RI	Remedial Investigation
RR	Railroad
RVAAP	Ravenna Army Ammunition Plant
S	South
SAIC	Science Applications International Corporation
SI	Site Investigation
SOW	Scope of Work
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 Center
UST	Underground Storage Tank
UXO	Unexploded Ordnance
WW	Waterworks

## 1.0 INTRODUCTION

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Science Applications International Corporation (SAIC) has been contracted by the United States Army Corps of Engineers (USACE) Louisville District to conduct Phase I Remedial Investigation (RI) services at nine (9) Areas of Concern (AOCs) at the former Ravenna Army Ammunition Plant (RVAAP) (Figures 1-1 and 1-2). The Phase I RI services consist of a historical data review, which is equivalent to a Preliminary Assessment under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Subsequent sampling activities to complete the Phase I RI will be performed by others under a future scope of work. Knowledge of past facility practices and events and recent research have identified these 9 AOCs as requiring further study. Three AOCs were previously identified and six AOCs were recently added to the RVAAP Installation Restoration Program (IRP) Program as a result of recent changes in the Department of Defense's (DoD) Defense Environmental Restoration Program (DERP) policy.

The 9 AOCs are referred to as Compliance Restoration (CR) sites and include the following (Figure 1-2):

- CC-RVAAP-68: Electric Substations (East, West, No. 3);
- CC-RVAAP-69: Building 1048 Fire Station;
- CC-RVAAP-70: East Classification Yard;
- CC-RVAAP-72: Facility-Wide Underground Storage Tanks (USTs);
- CC-RVAAP-73: Facility-Wide Coal Storage;
- CC-RVAAP-74: Building 1034 Motor Pool Hydraulic Lift;
- CC-RVAAP-75: George Road Sewage Treatment Plan;
- CC-RVAAP-76: Depot Area; and
- CC-RVAAP-77: Building 1037 Laundry Waste Water Sump.

These sites may be potentially impacted by hazardous, toxic, or radioactive waste (HTRW) and/or possible munitions constituents (MC) identified under the Military Munitions Response Program (MMRP) (e.g., explosives, propellants, metals).

The objectives for this project include the following:

- Conduct comprehensive background historical review and research data pertaining to the 9 CR sites, including:
  - Review historical records and aerial photographs;
  - Conduct interviews with site personnel; and
  - Conduct property visits and perimeter surveys of the 9 CR sites.
- Establish data quality objectives (DQOs) to support further investigation at the sites; and
- Document the findings in a Historical Records Review Report.

## 1.1 PURPOSE AND SCOPE

This Project Management Plan (PMP) describes SAIC's approach to executing this project and meeting the requirements of the Scope of Work (SOW) dated January 19, 2010. 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 the Phase I RI activities to be conducted by SAIC and SAIC subcontractors for the 9 CR sites identified in the SOW. All references to managers, organizations, processes in this document are intended to refer to SAIC's management team, organization, and processes, unless otherwise specified.

## 1.2 PLAN ORGANIZATION

The remaining sections of this PMP are organized as follows:

- Section 2: *Facility Background* – summarizes facility and CR site background information.
- Section 3: *Summary of Work and Assumptions* – provides a summary of the work to be performed and assumptions.
- Section 4: *Project Execution and Organization* – describes the execution and coordination activities to be conducted during the project and also the project organization structure.
- Section 5: *Project Reporting* – summarizes the project reporting requirements and communication activities.
- Section 6: *Project Schedule* – provides the project schedule.
- Section 7: *References* – lists the references used in the document.

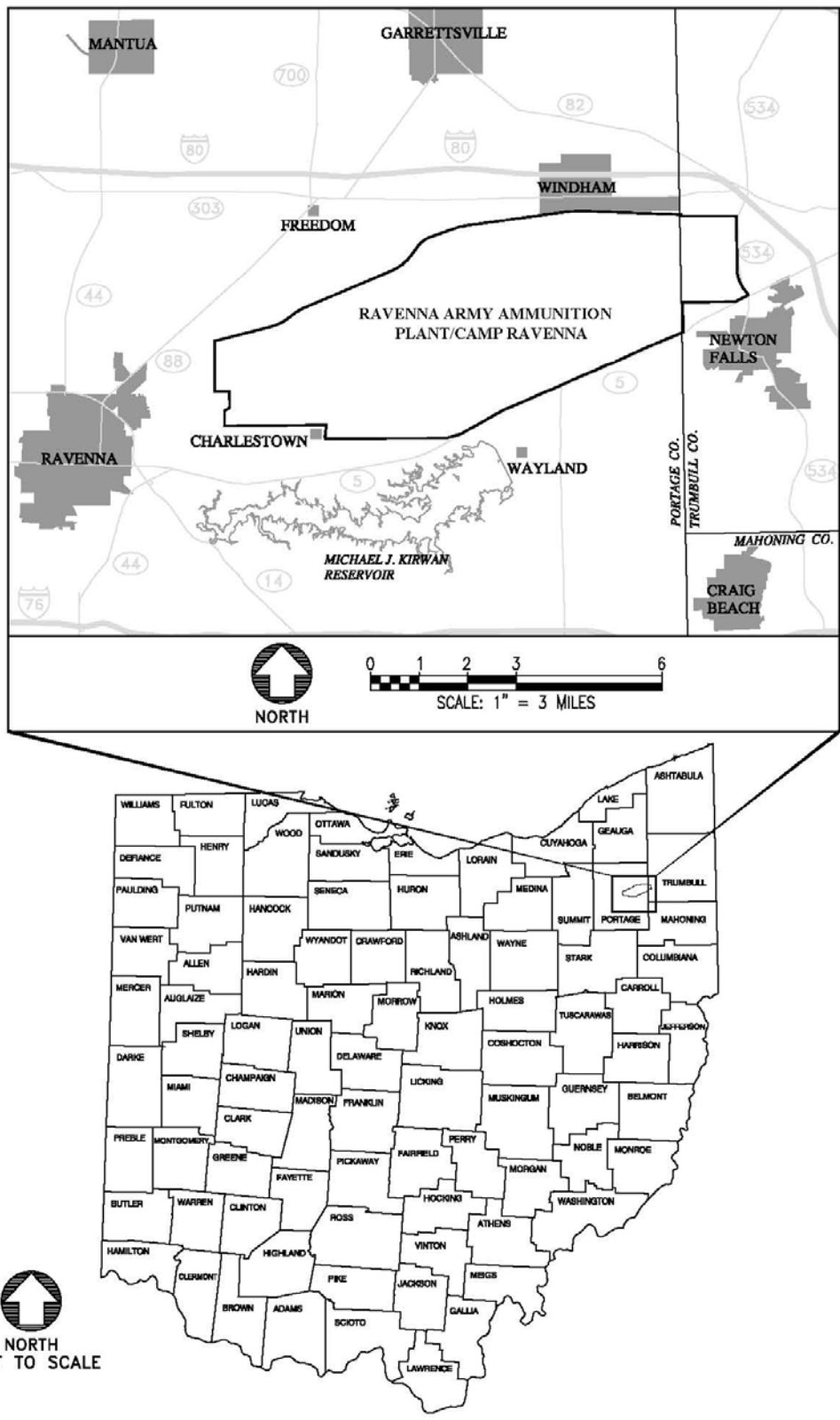


Figure 1-1. General Location and Orientation of RVAAP/Camp Ravenna

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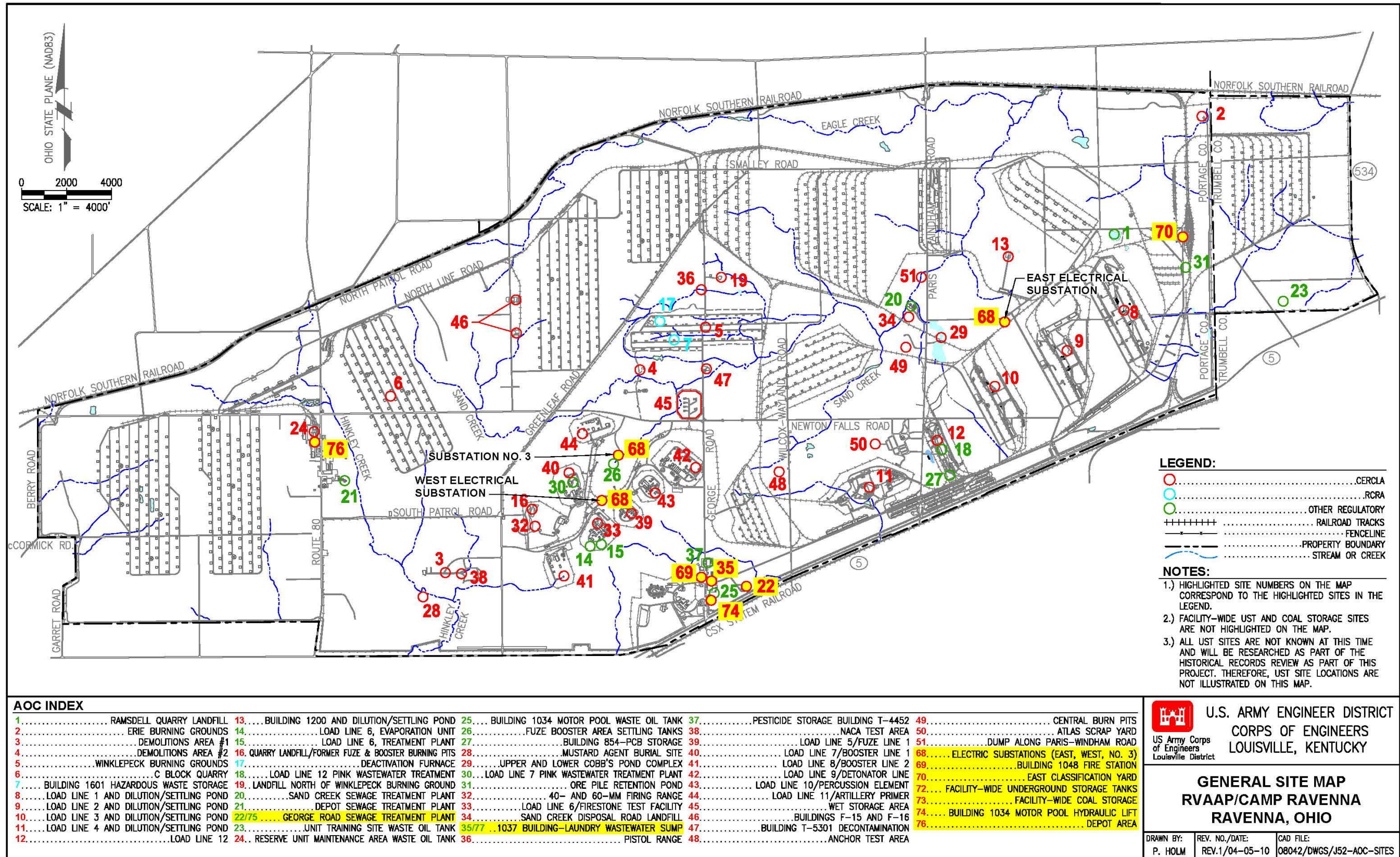


Figure 1-2. RVAAP/Camp Ravenna Installation Map

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## **2.0 FACILITY BACKGROUND**

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### **2.1 GENERAL FACILITY DESCRIPTION**

When the RVAAP IRP began in 1989, RVAAP was identified as a 21,419-acre installation. The property boundary was resurveyed by Ohio Army National Guard (OHARNG) over a 2-year period (2002 and 2003) and the total acreage of the property was found to be 21,683.289 acres. As of February 2006, a total of 20,403 acres of the former 21,683-acre RVAAP has been transferred to the National Guard Bureau (NGB) and subsequently licensed to OHARNG for use as a military training site.

The current RVAAP consists of 1,280 acres scattered throughout the OHARNG Camp Ravenna Joint Military Training Center, herein referred to as Camp Ravenna (Figure 1-2). Camp Ravenna is in northeastern Ohio within Portage and Trumbull Counties, approximately 3 miles (4.8 km) east-northeast of the City of Ravenna and approximately 1 mile (1.6 km) northwest of the City of Newton Falls. The RVAAP portions of the property are solely located within Portage County. RVAAP/Camp Ravenna is a parcel of property approximately 11 miles (17.7 km) long and 3.5 miles (5.6 km) wide bounded by State Route 5, the Michael J. Kirwan Reservoir, and the CSX System Railroad on the south; Garret, McCormick, and Berry roads on the west; the Norfolk Southern Railroad on the north; and State Route 534 on the east (Figures 1-1 and 1-2). Camp Ravenna is surrounded by several communities: Windham on the north; Garrettsville 6 miles (9.6 km) to the northwest; Newton Falls 1 mile (1.6 km) to the southeast; Charlestown to the southwest; and Wayland 3 miles (4.8 km) to the south.

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

The following is a description of each CR site included in the SOW for this project. Figure 1-2 presents a map illustrating the locations of each CR site, with the exception of the facility-wide USTs. Limited information is available on the locations of the former USTs and will be collected as part of this review.

### **2.2 COMPLIANCE RESTORATION SITE DESCRIPTIONS**

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

The east electrical substation is located in close proximity to the intersection of Remalia Road and Load Line No. 2 Road at RVAAP. The substation comprises an area of approximately 12,300 square feet, which includes the land surrounding Building 25-27. Building 25-27 is included as part of this AOC. The west electrical substation is located west of Load Line 5 on Fuze & Booster Service Road at the RVAAP facility. The substation comprises an area of approximately 3,000 square feet, which includes



the land surrounding Building 28-28, which was formerly used as the transformer station. Building 28-28 is not included as part of this AOC. Substation No. 3 is located in the Fuze & Booster Service area between Load Lines 10 and 11 at the RVAAP facility. The substation comprises an area of approximately 10,000 square feet. The substation and all transformer equipment have been removed from the site.

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

The fire station was located in the 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 includes the ground surface behind the former building location.

### **2.2.3 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.

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 rail yard reportedly consisted of 18 tracks with a 750 car capacity, and 3 Hi-X tracks with a 120 car capacity, which also included the wash rack south of the main track area. This yard was equipped with a locomotive repair building (Round House) and an herbicide storage shed along Tracks # 47 and 48.

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

Facility records document the former presence and use of 50 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.

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 an

Munitions Response Site (MRS) and Munitions and Explosives of Concern (MEC) avoidance procedures will required for property visits and perimeter surveys in this area. Table 2-1 provides a listing of former USTs at RVAAP as documented in the RVAAP Environmental Baseline Survey (Vista 1998).

**Table 2-1. Former USTs at RVAAP**

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

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

### **2.2.5 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;
- Load Line 4 Powerhouse;
- Load Line 12 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 and; therefore, MEC avoidance procedures may required for property visits and perimeter surveys in these areas.

### **2.2.6 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 and 4 feet 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.

### **2.2.7 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 operations.

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, it may have impacted the receiving (down-gradient) trickling filters and/or the down-gradient drying beds.

### **2.2.8 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, MC, and/or Munitions Debris (MD), although it is not currently a recognized MRS.

### **2.2.9 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 entering 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.

### **3.0 SUMMARY OF WORK AND CLARIFICATIONS**

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Table 3-1 summarizes the tasks to be completed as part of this delivery order.

**Table 3-1. Delivery Order Detailed Task Descriptions**

Task No.	Task Description	Planned Scope and Clarifications
1.0	<i>Project Management</i>	Mr. Kevin Jago, PG will serve as the SAIC Project Manager for this task. The project management structure is presented in Section 5.0 of this PMP.
1.1	<i>Project Management Plan</i>	SAIC will develop a project management plan summarizing SAIC’s overall technical and management approach for this project. The PMP will include a summary of the work to be performed, project schedule, project team roles and responsibilities, and a deliverable matrix. The PMP will be updated if changes are made during the course of project implementation.
1.2	<i>Quality Control Plan</i>	SAIC will provide a quality control plan to define the procedures under which deliverables will be produced to control product quality.
1.3	<i>Site Safety and Health Plan</i>	SAIC will develop a SSHP Addendum to address task hazards associated with this project. At least one CR site (Underground or Coal Storage Sites at Atlas Scrap Yard) may be located within an MRS. Therefore, the SSHP Addendum will include protocols for MEC avoidance.
1.4	<i>Project Execution/Client Correspondence</i>	<p>Subtask 1.4.1: Project Kick-Off Meetings</p> <ul style="list-style-type: none"> <li>• SAIC will issue an agenda, attend a kick-off meeting to be held at RVAAP or the SAIC office located in Twinsburg, Ohio, and issue meeting minutes.</li> </ul> <p>Subtask 1.4.2: Monthly Progress Reports</p> <ul style="list-style-type: none"> <li>• SAIC will prepare monthly progress reports in the standard RVAAP format established for compliance with the Ohio EPA DFFO for Ravenna.</li> </ul> <p>Subtask 1.4.3: Records of Conversation</p> <ul style="list-style-type: none"> <li>• SAIC will prepare teleconference and/or contact reports to document stakeholder discussions and decisions related to the project.</li> </ul> <p>Subtask 1.4.4: Teleconference Progress Updates</p> <ul style="list-style-type: none"> <li>• The SAIC PM and SAIC Project Engineer will participate in bi-weekly project status teleconferences throughout the period of performance. SAIC will submit bi-weekly project schedule updates to USACE Louisville District’s (CELRL’s) RVAAP program schedule subcontractor (currently Management Solutions, LLC). In addition, the SAIC PM and TM will participate in up to 48 bi-weekly RVAAP program schedule teleconferences throughout the period of performance.</li> </ul>

**Table 3-1. Delivery Order Detailed Task Descriptions (continued)**

Task No.	Task Description	Planned Scope and Clarifications
		<p>Subtask 1.4.5: Meeting Minutes Documentation</p> <ul style="list-style-type: none"> <li>• SAIC will prepare meeting minutes for bi-weekly project status teleconferences per Subtask 1.4.4 for distribution to RVAAP stakeholder team.</li> </ul> <p>Subtask 1.4.6: Public Involvement/ RAB Meetings</p> <ul style="list-style-type: none"> <li>• Participation or presentations in RAB meetings is not currently anticipated per the SOW.</li> </ul>
2.0	<i>Historical Review and Research of Available Data</i>	SAIC will conduct a comprehensive background historical review and research of available data pertaining to the 9 CR sites in the Phase I RI as described by Subtask below.
2.1	<i>Conduct Historical Review of Available Information</i>	<p>Subtask 2.1.1: Review of Available Information</p> <ul style="list-style-type: none"> <li>• SAIC will conduct a historical review of available data at the 9 CR sites.</li> </ul> <p>Subtask 2.1.2: Property Historical Data/Archive File Search</p> <ul style="list-style-type: none"> <li>• SAIC will conduct on-site records and archive searches in conjunction with the RVAAP Administrative Record Manager.</li> <li>• SAIC will research on-line information sources available through the following data centers noted in Section 4.2.1 of the SOW: <ul style="list-style-type: none"> <li>○ National Archives and Records Administration</li> <li>○ Regional Archives or Records Centers</li> <li>○ Air Force Historical Research Agency</li> <li>○ Military History Institute.</li> </ul> </li> <li>• SAIC may access relevant available on-line documents/files if discovered.</li> </ul> <p>Subtask 2.1.3: Historical Aerial Photographs</p> <ul style="list-style-type: none"> <li>• Aerial photographs of the CRs will be generated for plates/figures in the historical data report. Photographs will be extracted from available electronic image files or hardcopy versions will be scanned if no electronic image files exist.</li> </ul> <p>Subtask 2.1.4: Interviews</p> <ul style="list-style-type: none"> <li>• SAIC will interview four persons knowledgeable of former RVAAP operations (Mark Patterson, Jim McGee, Tom Chanda, and Tim Morgan). Additional persons may be interviewed at the recommendation of RVAAP stakeholders.</li> </ul>



**Table 3-1. Delivery Order Detailed Task Descriptions (continued)**

Task No.	Task Description	Planned Scope and Clarifications
		<p>Subtask 2.1.5: Property Visit</p> <ul style="list-style-type: none"> <li>• SAIC will conduct a visual reconnaissance of each CR site to include general site conditions, evidence of potential releases, condition of any remaining structures, general natural resources (e.g., presence of wetlands or surface water conveyances that may be sensitive habitats), and presence of cultural and historic resources.</li> <li>• For property visits at CR sites within known MRSs, UXO avoidance support at the following AOCs recognized as MRSs based on the RVAAP Final MMRP SI: Depot Area, Atlas Scrap Yard (coal storage and UST sites), Fuze/Booster Quarry (coal storage and UST sites). In addition, the MEC services provider will prepare an ASSHP, conduct a pre-entry MEC safety briefing, and prepare a final report of field observations/findings at the above listed AOCs. MEC surveys of AOCs or sites not listed as MRSs for further investigation in the Final MMRP SI Report are not included in SAIC's cost proposal.</li> </ul> <p>Subtask 2.1.6: Perimeter Survey</p> <p>SAIC will conduct visual survey perimeter properties surrounding each CR site to include general site conditions, evidence of potential releases off of the CR site, condition of any adjacent remaining structures, general natural resources (e.g., presence of wetlands or surface water conveyances that may be sensitive habitats), and presence of cultural and historic resources.</p>
2.2	<i>Historical Records Review Report</i>	<ul style="list-style-type: none"> <li>• SAIC will develop a Historical Records Review Report to document the findings and identify DQOs to support further investigations of the 9 CR sites.</li> <li>• DQO development will follow the DQO process outlined in the USACE Engineering Manual, Technical Project Planning, EM 200-1-2 (USACE 1998).</li> </ul>

AOC = Area of Concern  
ASSHP = Abbreviated Site Safety and Health Plan  
CR = Compliance Restoration  
DFFO = Director's Final Findings and Orders  
DQO = Data Quality Objective  
EM = Engineering Manual  
MEC = Munitions and Explosives of Concern  
MMRP = Military Munitions Response Program  
MRS = Munitions Response Site  
Ohio EPA = Ohio Environmental Protection Agency  
PG = Professional Geologist  
PM = Project Manager

PMP = Project Management Plan  
RAB = Restoration Advisory Board  
RI = Remedial Investigation  
RVAAP = Ravenna Army Ammunition Plant  
SAIC = Science Applications International Corporation  
SI = Site Investigation  
SOW = Scope of Work  
SSHP = Site Safety and Health Plan  
TM = Task Manager  
USACE = United States Army Corps of Engineers  
UST = Underground Storage Tank  
UXO = Unexploded Ordnance

## **4.0 PROJECT EXECUTION AND ORGANIZATION**

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### **4.1 PROJECT EXECUTION**

This PMP will be updated, if necessary, after completion of major deliverable milestones to address significant changes to the overall technical and/or management approach. The updated PMP will be distributed to all RVAAP Interested Parties (refer to Section 4.4). Updates to the PMP shall be noted as Revisions, and will be numbered sequentially. The initially-approved PMP will be designated as Revision 0.

All work performed to satisfy the requirements of the SOW shall follow this PMP and shall be performed in accordance with the following documents:

- Ohio Environmental Protection Agency (Ohio EPA) Director's Final Findings and Orders (DFFO) for RVAAP (Ohio EPA 2004);
- Facility-Wide Safety and Health Plan (FWSHP) (USACE 2001); and

Project execution will follow applicable guidance such as the Environmental Protection Agency's (EPA's) "Guidance for Performing Preliminary Assessments Under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)" or the American Society for Testing and Materials (ASTM) Designation *E 1527-05: Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

### **4.2 GOVERNMENT FURNISHED RESOURCES**

SAIC shall coordinate with the Army, OHARNG, and RVAAP maintenance/caretaker contractor to gain access to the facility and available infrastructure and utilities as required for execution of this project. The Government will provide the following resources to SAIC, if available:

- Pertinent records, reports, data, analysis, and information, in their current format (e.g., hardcopy, electronic copy, cassette tape, disks, CDs) to facilitate development of a complete and accurate assessment of current, former and historical site activities and operations;
- Waste generation and contaminant characteristics;
- Parameters of interest;
- Site environmental conditions;
- Access to appropriate personnel to conduct interviews on facility operations and activities; and
- Access to all applicable DoD and Army policy and guidance documents.

### **4.3 PROJECT ORGANIZATION, ROLES, AND RESPONSIBILITIES**

The organization chart illustrated in Figure 4-1 outlines the management structure that will be used to implement the project. The functional responsibilities of the key SAIC personnel are described in the following parts of this plan. The assignment of personnel to each project position is based on a combination of the following:

- Experience in the type of work to be performed;
- Experience working with government personnel and procedures;
- A demonstrated commitment to high quality and timely job performance; and
- Staff availability.

The key project personnel have been assigned based upon the minimum education and qualification requirements for each assigned position. In the event that personnel identified in Figure 4-1 must be replaced after issuance of these documents, SAIC will provide the names for the replacement individuals to the USACE – Louisville District Project Manager (PM).

#### **4.3.1 SAIC Project Manager**

The SAIC PM manages the overall project performance and quality of the project deliverables. This individual also will provide the overall financial management of the project, and serve as the point of contact with the USACE-Louisville District PM.

The SAIC PM is responsible for the timely submittal of all deliverables in the quantities requested. If at any time, adhering to the schedule will compromise the quality of the deliverable, the SAIC PM will give the USACE PM sufficient notice of the delay and justify the need for an extension by explaining the impact to the project/deliverable.

#### **4.3.2 SAIC Project Engineer**

The SAIC Project Engineer will assist the SAIC PM, as requested, with PM-related activities and will be the lead task manager (TM) for tasks identified in the SOW. The SAIC Project Engineer is responsible for all project activities, including project objectives, data analysis, and report preparation. This individual will develop, monitor, and fill project staffing needs, delegate specific responsibilities to project team members, and coordinate with administrative staff to maintain a coordinated and timely flow of project activities. The SAIC Project Engineer reports directly to the SAIC PM.

#### **4.3.3 SAIC Quality Assurance/Quality Control Officer**

The SAIC quality assurance/quality control (QA/QC) Officer is responsible for the project QA/QC in accordance with the requirements of the appropriate SAIC management guidance. This individual will be responsible for oversight and review of all documents and will ensure that the quality control

responsibilities of the project team members are carried out. The SAIC QA/QC Officer reports directly to the SAIC PM, but will inform the SAIC Managers, as appropriate, of all information and decisions reported.

#### **4.3.4 SAIC Health and Safety Manager**

The SAIC Health and Safety Manager manages the project health and safety program. This includes establishing health and safety policies and procedures, supporting project and office activities, and verifying safe work practices and conditions. Specific responsibilities of the SAIC Health and Safety Manager include:

- Reviewing and approving Site Safety and Health Plan (SSHP) addenda;
- Providing oversight and liaison with the Project and/or Site Health and Safety Officer;
- Conducting on-site audits during field work, if required; and
- Approving downgrades in personal protective equipment (PPE) or protective procedures.

#### **4.3.5 UXO Support**

USA Environmental, Inc. will provide MEC/unexploded ordnance (UXO) support during the property visit and perimeter surveys. The UXO Technician will clear pathways for safe passage as described in Section 4.0 of the 2010 RI Services at 9 CR Sites, Site Safety and Health Plan (USACE 2010).

### **4.4 RVAAP INTERESTED PARTIES**

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

- USACE – Louisville District;
- RVAAP;
- United States Army Environmental Center (USAEC);
- OHARNG;
- NGB;
- Ohio EPA;
- Base Realignment and Closure Division (BRACD);
- U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM);
- Other contractors working on facility; and
- Restoration Advisory Board (RAB) and general public.

## 4.5 PUBLIC INVOLVEMENT

Public meetings or presentations to the RAB are not currently planned for this project. Draft and Final project deliverables will be posted to the RVAAP public website at [www.rvaap.org](http://www.rvaap.org), wherein any member of the public may view and offer comment on the documents.

## 4.6 PROJECT DELIVERABLES

The deliverable schedule is provided in Section 6.0 of this PMP. Table 4-1 summarizes project deliverable and approval requirements. 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). SAIC will deliver the number of electronic and hard copy deliverables required for each document as defined in the SOW. SAIC's project management approach includes the following Army and Ohio EPA review and comment cycles for each deliverable in accordance with USACE Louisville policy and the Ohio EPA DFFO for RVAAP:

- Preliminary Draft Deliverables: Army review only – up to 30 calendar days;
- Draft Deliverable concurrence and comment response QA review: Army – up to 20 calendar days;
- Draft Deliverable IRP Team review: Ohio EPA, OHARNG, and Army – minimum of 45 calendar days;
- Final Deliverable concurrence and comment response QA review: Army – up to 10 calendar days; and
- Final Deliverable IRP Team review/approval: Ohio EPA, OHARNG, and Army – minimum of 45 calendar days.

The Army, Ohio EPA, and OHARNG may jointly elect to streamline the document review process by elimination of either a Preliminary Draft or Draft deliverable review cycles. SAIC will develop provisional responses to comments on Draft and Final deliverables and request a comment response meeting, as required, within 15 calendar days of receipt of comments in accordance with the Ohio EPA DFFO for RVAAP. SAIC's project schedule assumes the same 15 calendar day timeline to address Army comments on Preliminary Draft versions of the documents, unless required otherwise to meet milestone schedules. SAIC will address Ohio EPA and Army comments in a clear and concise manner using a standard comment response table format that uniquely identifies each comment. Responses to comments will be specific with regards to delineating any changes to be made to the documents. SAIC will develop the revised document within the 30 calendar day timeline in accordance with the Ohio EPA DFFO for RVAAP.

**Table 4-1. Deliverable Approval Matrix**

<b>Deliverable</b>	<b>USACE</b>	<b>Ohio EPA</b>	<b>Public</b>
<b><i>Task 1.0: Project Management</i></b>			
Preliminary Draft PMP	C	—	—
Draft PMP	C	C	P
Final PMP	A	A	P*
Preliminary Draft QCP	C	—	—
Draft QCP	C	—	P
Final QCP	A	—	P*
Preliminary Draft SSHP	C	—	—
Draft SSHP	C	C	P
Final SSHP	A	A	P*
<b><i>Task 2.0: Historical Review and Research of Available Data</i></b>			
Preliminary Draft Historical Records Review Report	C	—	—
Draft Historical Records Review Report	C	C	P
Final Historical Records Review Report	A	A	P*

A = Formal Approval

C = Provide Comment

— = Does not review or provide comments

P = Available to the public via RVAAP Administrative Records

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

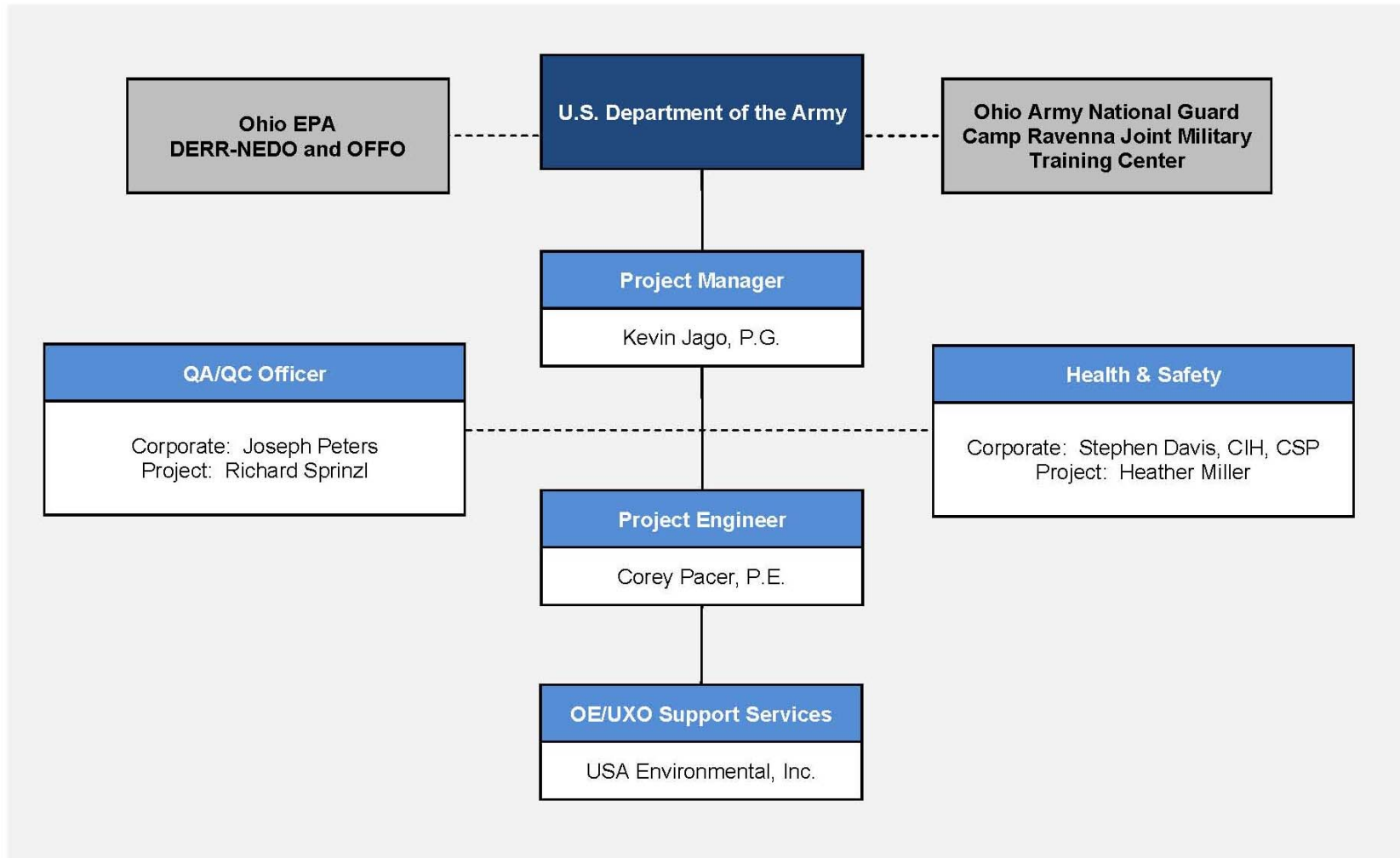
Ohio EPA = Ohio Environmental Protection Agency

PMP = Project Management Plan

QCP = Quality Control Plan

SSHP = Site Safety and Health Plan

USACE = United States Army Corps of Engineers



**Figure 4-1. Organizational Chart**

## **5.0 PROJECT REPORTING**

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

### **5.1 BIWEEKLY STATUS TELECONFERENCES**

SAIC will conduct biweekly status meetings with the appropriate interested parties per the SOW by means of a conference call. The purpose of these meetings is to address the progress to date, summarize anticipated activities, address any problems or issues with regards to the project, and discuss any corrective actions. A standard agenda for this biweekly conference call will be issued at least two days prior to each call for review and comment. Upon the incorporation of comments to the agenda, a finalized agenda will be provided to the interested parties. The project status includes, but is not limited to:

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

SAIC will provide meeting minutes of the biweekly status meeting to all Interested Parties.

### **5.2 MONTHLY PROGRESS REPORTS**

As required by the Ohio EPA DFFO for RVAAP (Ohio EPA 2004), unless otherwise specified in writing by Ohio EPA, a written progress report for every month shall be provided to the USACE Louisville District Contracting Officer Representative (COR) or designee by the fifth day of each month. USACE will compile Monthly Progress Reports from all contractors to submit to Ohio EPA by the tenth day of each month. USACE has established a template for these monthly progress reports to comply with requirements of the Ohio EPA DFFO for RVAAP (Figure 5-1). SAIC will use this template to detail the following progress items:

- Describe the status of all active project tasks and progress made toward satisfying requirements during the reporting period;
- Describe difficulties encountered during the reporting period and actions taken to rectify them;
- Describe activities planned for the following month;
- Identify changes in key personnel;
- List target and actual completion dates for each element of activity, including project completion; and



- Provide an explanation for any deviation from any applicable schedules.

### **5.3 SCHEDULE UPDATES**

A detailed working schedule has been developed as part of this PMP (Figure 6-1) that outlines major project elements and due dates for all major deliverables. This detailed project schedule shall be updated monthly to accurately reflect project progress, and shall be included as part of the monthly progress report submittal. Additionally, SAIC shall participate in RVAAP biweekly schedule update conference calls organized by USACE to apprise the RVAAP Project Team on progress of activities.

### **5.4 RECORDS/DATA MANAGEMENT**

SAIC will submit all data and documentation to SAIC's Central Records Facility (CRF) per SAIC's QA Program. All documents generated during the course of this project will be maintained in both electronic and hard copy. Electronic reports for submission to RVAAP Environmental Information Management System (REIMS) will adhere to criteria for entry into the database.

## SAIC MONTHLY REPORT

**Contract Number:** W912QR-08-D-0008 **Report Number:** 1  
**Project No.:** Delivery Order 0019 **Period:** DATE  
**Contractor:** SAIC  
8866 Commons Blvd. Suite 201, Twinsburg, OH 44087  
**Location:** Ravenna Army Ammunition Plant, Ravenna, OH  
**Project Name:** 2010 Phase I Remedial Investigation Services at Compliance Restoration Sites

**SUMMARY OF ACTIVITIES:**

**HEALTH AND SAFETY PERFORMANCE:**

**PROBLEMS ENCOUNTERED/RESOLUTION:**

**PLANNED ACTIVITIES:**

**ACTIVITY AND PROGRESS COMPLETION TABLES:**

Target/Milestone Activity	Scheduled Completion Date	Actual Completion Date	Status

**CHANGES IN KEY PERSONNEL:**

**DEVIATION IN SCHEDULE (with explanation):**

**REMARKS:**

**SAIC PROJECT MANAGER:**

**SIGNATURE:**

**Figure 5-1. SAIC Monthly Report**

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## 6.0 PROJECT SCHEDULE

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As part of this PMP, SAIC has developed and maintained a detailed project schedule (Figure 6-1) that includes due dates for all major deliverables leading to completion of the project by December 24, 2011. The current period of performance for the delivery order is March 8, 2012.

The PM will have primary responsibility for maintaining the project schedule throughout the contract performance period. The schedule will be updated biweekly to accurately reflect project progress and schedule changes; schedule information also will be provided for integration into the overall RVAAP IRP schedule managed by the USACE Louisville District. Updated schedule information shall also be included with the monthly project updates submitted to USACE on the fifth of every month.

In the event that a document schedule extension beyond DFFO requirements is needed to address technical or programmatic issues, SAIC will notify USACE (the responsible party). The U.S. Army will request an extension from Ohio EPA in accordance with the DFFO, by specifying:

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

In the event a contractual extension of the delivery order period of performance is needed, SAIC will request an extension through the USACE COR and Contracts Department.

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### Ravenna 2010 Phase I Schedule ~ Proposed Project Schedule

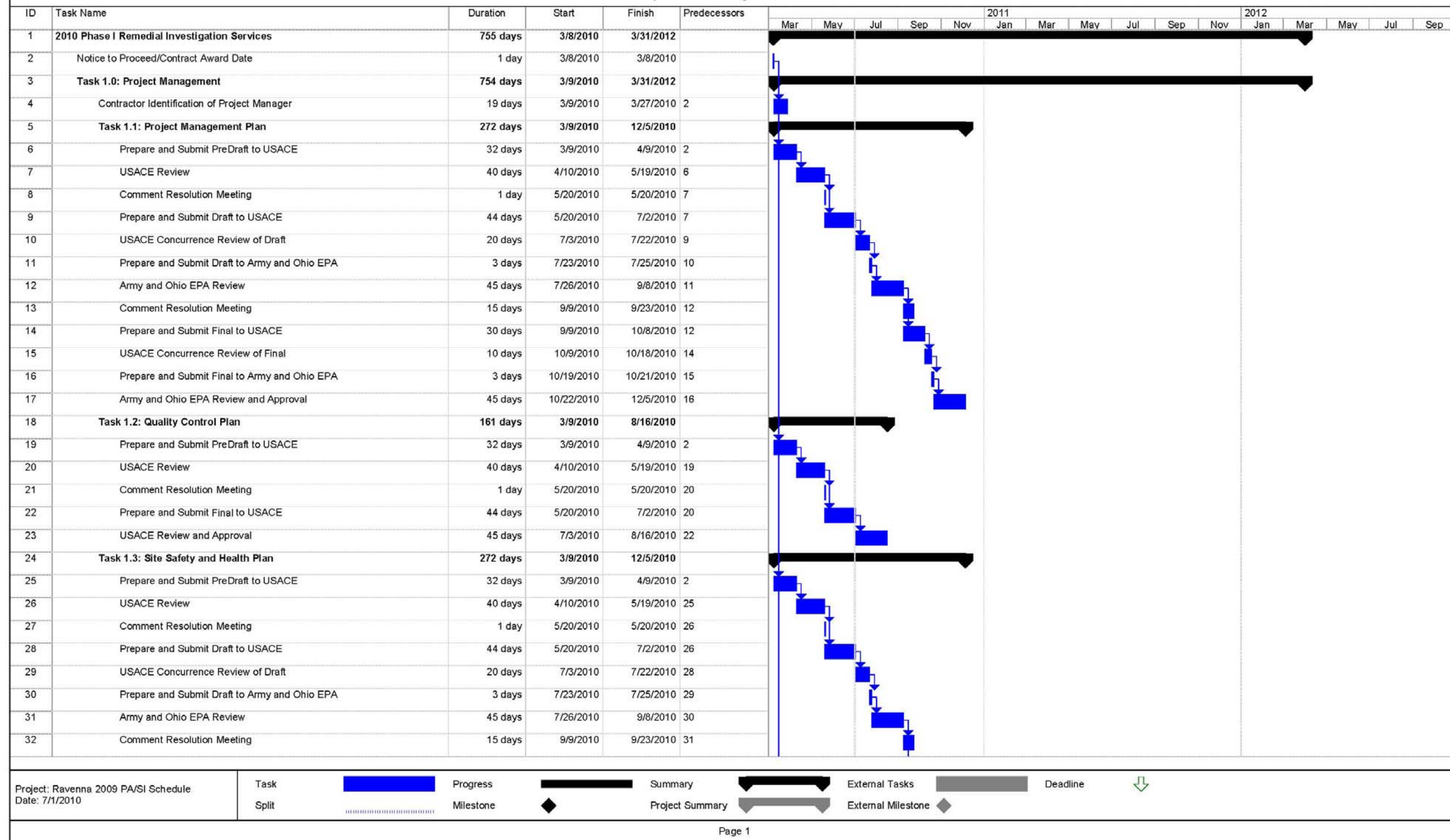


Figure 6-1. Project Schedule



## 7.0 REFERENCES

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

United States Army Corps of Engineers (USACE 1998). *Technical Planning Process (Engineer Manual 200-1-2)*, dated August 31, 1998.

USACE 2001. *Facility Wide Safety and Health Plan for Environmental Investigations at the Ravenna Army Ammunition Plant, Ravenna, Ohio*, DACA62-00-D-0001, D.O. CY02, March 2001.

USACE 2010. *Draft Site Safety and Health Plan for the 2010 Phase I Remedial Investigation Services at Compliance Restoration Sites (9 Areas of Concern), Addendum No. 1*, dated July 2, 2010.

Vista Technologies (Vista 1998). *Final Environmental Baseline Survey for the Ravenna Army Ammunition Plant*, dated September 25, 1998.

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



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**DRAFT PROJECT MANAGEMENT PLAN FOR  
THE 2010 PHASE I REMEDIAL INVESTIGATION SERVICES AT COMPLIANCE RESTORATION SITES (9 AREAS OF CONCERN)  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE  
Rev. 1 September 1, 2010**

Comment Number	Page or Sheet & Line No.	New Page or Sheet	Comment	Recommendation	Response
<i>Army (Mark Patterson)</i>					
A-1	Table 2-1, Page 2-3	Table 2-1, Page 2-3	The USTs at the UTES were not part of the Arsenal operations and would therefore not be part of this project. This was discussed years ago with Tom Daugherty and Eileen and it was decided that the Guard would deal with the site if necessary.		Agree. USTs RV-91, RV-92, and RV-95 for the UTES will be deleted from the table.
<i>OHARNG Camp Ravenna (Katie Tait)</i>					
CR-1	Pg 2-3, Table 2-1	Pg 2-3, Table 2-1	UTES area only had 2 former USTs (one with fuel oil and one with waste oil). These tanks were owned and operated by the OHARNG. The waste oil UST is listed as RVAAP-23. Therefore, I am tracking on 1 UST but not the other 2 that are listed. Not sure what USTs are being referenced. Please clarify.		Clarification. Table 2-1 was derived from the RVAAP Environmental Baseline Survey. SAIC currently does not have additional information on the subject USTs, pending research of historical information. Per comment A-1, USTs RV-91, RV-92, and RV-95 listed for the UTES area have been deleted from the table, as they are not included in the scope of CC-RVAAP-72. However, SAIC will provide any additional data relating to location and purpose of the USTs as historical data research is conducted.

**DRAFT PROJECT MANAGEMENT PLAN FOR  
THE 2010 PHASE I REMEDIAL INVESTIGATION SERVICES AT COMPLIANCE RESTORATION SITES (9 AREAS OF CONCERN)  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE  
Rev. 1 September 1, 2010**

Comment Number	Page or Sheet & Line No.	New Page or Sheet	Comment	Recommendation	Response
CR-2	Pg. 2-4, Section 2.2.7 George Road Treatment Plant	Pg. 2-5, Section 2.2.7 George Road Treatment Plant	Again, this CC site is related to a mercury spill. The sewage treatment plant itself was addressed under the NPDES permit closure. This site is related to addressing the mercury spill. This is not clear in the text. Please clarify.		Agree. The following text has been inserted on Page 2-5, after Line 10, describing potential historical releases of mercury at the George Road Sewage Treatment Plant:  “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.”
<i>Ohio EPA (Todd Fisher)</i>					
O-1	Document Distribution List	Document Distribution List	Katie Elgin has changed her last name.	Please change “Elgin” to “Tait”	Agree. Change has been made as recommended.

**DRAFT PROJECT MANAGEMENT PLAN FOR  
THE 2010 PHASE I REMEDIAL INVESTIGATION SERVICES AT COMPLIANCE RESTORATION SITES (9 AREAS OF CONCERN)  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE  
Rev. 1 September 1, 2010**

Comment Number	Page or Sheet & Line No.	New Page or Sheet	Comment	Recommendation	Response
O-2	General	Pg. 1-1	This plan states that SAIC has been contracted to conduct Phase I Remedial Investigation services for the nine (9) Areas of Concern Compliance Restoration Sites. Ohio EPA questions whether this project should be called a "Remedial Investigation," since no sampling is planned and the nature, rate, and extent of contamination will not be determined. Why not call this project a "Site Investigation?"	Please provide discussion.	<p>Clarification. Text has been inserted on Page 1-1, Paragraph 1, as below explaining, for the purposes of this PMP, that the term Phase I RI refers to the initial portion of a Phase I RI (historical data review), which is equivalent to a Preliminary Assessment under CERCLA. Subsequent sampling activities will be performed by others under a future scope.</p> <p>"Science Applications International Corporation (SAIC) has been contracted by the United States Army Corps of Engineers (USACE) Louisville District to conduct Phase I Remedial Investigation (RI) services at nine (9) Areas of Concern (AOCs) at the former Ravenna Army Ammunition Plant (RVAAP) (Figures 1-1 and 1-2). The Phase I RI services consist of a historical data review, which is equivalent to a Preliminary Assessment under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Subsequent sampling activities to complete the Phase I RI will be performed by others under a future scope of work."</p>

**DRAFT PROJECT MANAGEMENT PLAN FOR  
THE 2010 PHASE I REMEDIAL INVESTIGATION SERVICES AT COMPLIANCE RESTORATION SITES (9 AREAS OF CONCERN)  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA, OHIO  
COMMENT RESPONSE TABLE  
Rev. 1 September 1, 2010**

Comment Number	Page or Sheet & Line No.	New Page or Sheet	Comment	Recommendation	Response
O-3	Page 2-2, Section 2.2.2, CC-RVAAP-69 Building 1048	Page 2-2, Section 2.2.2	There is no mention of a possible release of carbon tetrachloride from old fire extinguishers that is suspected to have occurred at this location. Also, the OHARNG staged soil at this location over the former building footprint. The soil was taken from the "bull pen" parking area located outside the main gate.	Please provide mention of carbon tetrachloride release in description.	<p>Agree. The following text has been inserted on Page 2-2, after Line 11, describing potential historical releases of carbon tetrachloride at Building 1048 from servicing of fire extinguishers:</p> <p>"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 includes the ground surface behind former building location."</p>
O-4	Page 2-4, Section 2.2.7, CC-RVAAP-75 George Road SWTP	Page 2-5, Section 2.2.7	There is no mention of the mercury release that occurred at this location. The extent of mercury contamination has not been identified.	Please provide mention of mercury release in the description.	<p>Agree. The following text has been inserted on Page 2-5, after Line 10, describing potential historical releases of mercury at the George Road Sewage Treatment Plant:</p> <p>"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."</p>