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**Disposal of Discarded Munitions Debris &  
Components; Demolition of RVAAP- 35 Building  
1037 – Laundry Waste Water Sump and Laundry  
Flame Proofing Building; and Evaluation and  
Recommendations for Closure of Clean-Hard Fill  
Sites**

**Revision 0**

**Ravenna Army Ammunition Plant (RVAAP)  
Ravenna, Ohio**

**Contract No: W52H09-08-C-5015**

*Submitted to*



**U.S. Army Tank-Automotive and Armaments Command  
1 Rock Island Arsenal  
Rock Island, IL 61299**

*Submitted by*  
**PIKA International, Inc  
12723 Capricorn Dr. Suite 500  
Stafford, TX 77477**

**January 26, 2009**

**Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP- 35  
Building 1037 – Laundry Waste Water Sump and Laundry Flame Proofing Building;  
Evaluation and Recommendations for Closure of Clean-Hard Fill Sites**

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RTLS-ENV - Ravenna Training and Logistics Site Environmental Specialist		
RVAAP - Ravenna Army Ammunition Plant		
TACOM - US Army Tank-automotive and Armaments Command		
USACE - United States Army Corps of Engineers – Louisville District		
USAEC – United State Army Environmental Center		

**Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP- 35  
Building 1037 – Laundry Waste Water Sump and Laundry Flame Proofing Building;  
Evaluation and Recommendations for Closure of Clean-Hard Fill Sites**

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1 **ACRONYMS**

2		
3	%	Percent
4	ACO	Administrative Contracting Officer
5	AHA	Activity Hazard Analysis
6	APP	Accident Prevention Plan
7	BD	Base Detonating
8	BRACO	Base Realignment and Closure Technical Support Office
9	CESHP	Corporate Environmental Safety and Health Plan
10	CESHM	Corporate Environmental Safety and Health Manager
11	CFR	Code of Federal Regulations
12	COR	Contracting Officers Representative
13	CWM	Chemical Warfare Material
14	CY	Cubic Yards
15	DA	Department of Army
16	DDESB	Department of Defense Explosives Safety Board
17	DID	Data Item Description
18	DOD	Department of Defense
19	DODI	Department of Defense Instruction
20	ECM	Earth Covered Magazine
21	ES&H	Environmental Safety and Health
22	ESHF	Environmental Safety and Health Form
23	ESHP	Environmental Safety and Health Procedure
24	EM	Engineering Manual
25	ESQD	Explosive Safety Quantity-Distance
26	ESS	Explosives Safety Submission
27	EZ	Exclusion Zone
28	FFP	Firm Fixed Price
29	FM	Facility Manager
30	GOCO	Government Owned, Contractor Operated
31	HAZWOPER	Hazardous Waste Operations and Emergency Response
32	HFD	Hazardous Fragmentation Distance
33	HQ	Headquarters

**Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP- 35  
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1	IAW	In Accordance With
2	IBD	Inhabited Building Distance
3	IDW	Investigation Derived Waste
4	IMD	Intermagazine Distance
5	IRP	Installation Restoration Program
6	LL	Load Line
7	MC	Munitions Constituents
8	MEC	Munitions and Explosives of Concern
9	MD	Munition Debris
10	MGFD	Munition with Greatest Fragmentation Distance
11	MPPEH	Material Possibly Presenting an Explosive Hazard
12	MR	Munitions Response
13	MRS	Munitions Response Site
14	MSD	Minimum Separation Distance
15	NEW	Net Explosive Weight
16	NGB	National Guard Bureau
17	NSCMP	Non Stockpile Chemical Material
18	ODA1	Open Demolition Area 1
19	ODA2	Open Demolition Area 2
20	Ohio EPA	Ohio Environmental Protection Agency
21	OHARNG	Ohio Army National Guard
22	OSHA	Occupational Safety and Health Administration
23	PAM	Pamphlet
24	PCB	Polychlorinated Biphenyls
25	PD	Point Detonating
26	PIKA	PIKA International, Inc.
27	PM	Program Manager
28	PjM	Project Manager
29	POC	Point of Contact
30	PPE	Personal Protective Equipment
31	PTRD	Public Traffic Route Distance
32	QA	Quality Assurance
33	QAP	Quality Assurance Plan

**Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP- 35  
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1	QAM	Quality Assurance Manager
2	QA/QCM	Quality Assurance Quality Control Manager
3	QC	Quality Control
4	QCM	Quality Control Manager
5	QCP	Quality Control Plan
6	Q-D	Quantity-Distance
7	RCWM	Recovered Chemical Warfare Material
8	RTLS	Ravenna Training and Logistics Site
9	RVAAP	Ravenna Army Ammunition Plant
10	SOW	Scope of Work
11	SS	Site Asbestos Supervisor
12	SSHO	Site Safety and Health Officer
13	SSHP	Site-Specific Safety and Health Plan
14	SUXOS	Senior UXO Supervisor
15	SZ	Support Zone
16	TACOM	US Army Tank-automotive and Armaments Command
17	TEU	Technical Escort Unit
18	TP	Technical Paper
19	USACE	United States Army Corps of Engineers
20	USAEC	United States Army Environmental Center
21	UXO	Unexploded Ordnance
22	UXOQCS	Unexploded Ordnance Quality Control Specialist
23	UXOSO	Unexploded Ordnance Safety Officer
24	VT	Proximity
25	WBG	Winklepeck Burning Grounds
26	WP	Work Plan
27	WZ	Work Zone

**Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP- 35 Building 1037 – Laundry Waste Water Sump and Laundry Flame Proofing Building; Evaluation and Recommendations for Closure of Clean-Hard Fill Sites**

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1 **1.0 INTRODUCTION**

2 **1.1 GENERAL INFORMATION**

3 This Work Plan (WP) has been developed in response to the Scope of Work (SOW)  
4 for Disposal of Discarded Munitions Debris and Components, Demolition of the  
5 Laundry Flame Proofing Building and Evaluation and Recommendations for Closure  
6 of Clean-Hard Fill Sites at the Ravenna Army Ammunition Plant (RVAAP) in Ravenna,  
7 Ohio. A copy of the SOW is presented in Appendix A.

8 The plan describes the procedures, operational sequence, and resources PIKA  
9 International, Inc. (PIKA) will use for the following tasks:

- 10 • Inspection, "Safe" certification, and offsite disposal or recycling of Material  
11 Possibly Presenting an Explosive Hazard (MPPEH) being stored at the RVAAP  
12 in explosives storage earth covered magazines (ECM) 7-C-4 and 1501.
- 13 • Inspect and prepare recommendations and cost estimates to close out the  
14 RVAAP clean-hard fill sites.
- 15 • Demolition of RVAAP– 35 Building 1037 – Laundry Waste Water Sump and  
16 Laundry Flame Proofing Building.

17 Note: Due to the demolition nature of this task, this component of the SOW  
18 will be included as part of the PIKA project "Removal of Buildings and  
19 Concrete Floor Slabs at RVAAP- 08 Load Line 1, & Other Miscellaneous  
20 Buildings and Removal & Disposal of Pallets". As such, the field activities and  
21 operational procedures associated with demolition of the Laundry Flame  
22 Proofing Building will be detailed in the "Removal of Buildings and Concrete  
23 Floor Slabs at RVAAP- 08 Load Line 1, & Other Miscellaneous Buildings and  
24 Removal & Disposal of Pallets" Work Plan document.

25 The work will be performed on behalf of the U.S. Army Tank-Automotive and  
26 Armaments Command (TACOM) and monitored by the U.S. Army Base Realignment  
27 and Closure Technical Support Office (BRACO).

28 **1.1.1 Project Authorization and Background**

29 Authorization for performance is contained in contract W52H09-08-C-5015 issued to  
30 PIKA by TACOM, Rock Island, Illinois.

**Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP- 35  
Building 1037 – Laundry Waste Water Sump and Laundry Flame Proofing Building;  
Evaluation and Recommendations for Closure of Clean-Hard Fill Sites**

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1     **1.1.2   RVAAP Location**

2     When the RVAAP Installation Restoration Program (IRP) began in 1989, the RVAAP  
3     was identified as a 21,419 acre installation. The property boundary was resurveyed  
4     by the Ohio Army National Guard (OHARNG) over a two year period (2002 and  
5     2003) and the actual total acreage of the property was found to be 21,683 acres.  
6     As of February 2006, a total of 20,403 acres has been transferred to the National  
7     Guard Bureau (NGB) and subsequently licensed to the OHARNG for use as a military  
8     training site known as the Ravenna Training and Logistics Site (RTLS). The current  
9     RVAAP consists of 1,280 acres scattered throughout the RTLS.

10    The RTLS is in northeastern Ohio within Portage and Trumbull Counties,  
11    approximately 4.8 kilometers (3 miles) east northeast of the city of Ravenna and  
12    approximately 1.6 kilometers (1 mile) northwest of the city of Newton Falls. The  
13    RVAAP portions of the property are solely located within Portage County. The  
14    RTLS/RVAAP is a parcel of property approximately 17.7 kilometers (11 miles) long  
15    and 5.6 kilometers (3.5 miles) wide bounded by State Route 5, the Michael J.  
16    Kirwan Reservoir, and the CSX System Railroad on the south; Garret, McCormick,  
17    and Berry roads on the west; the Norfolk Southern Railroad on the north; and State  
18    Route 534 on the east. The RTLS is surrounded by several communities: Windham  
19    on the north; Garrettsville 9.6 kilometers (6 miles) to the northwest; Newton Falls  
20    1.6 kilometers (1 mile) to the south east; Charlestown to the southwest; and  
21    Wayland 4.8 kilometers (3 miles) to the south.

22    When RVAAP was operational, the RTLS did not exist and the entire 21,683-acre  
23    parcel was a government-owned contractor operated (GOCO) industrial facility. The  
24    RVAAP IRP encompasses investigation and cleanup of past activities over the entire  
25    21,683 acres of the former RVAAP, references to the RVAAP in this document are  
26    considered to be inclusive of the historical extent of RVAAP, unless otherwise  
27    specifically stated. A regional map indicating the location of the RVAAP is presented  
28    in Appendix B as Figure 1. A facility map of the RVAAP is presented in Appendix B  
29    as Figure 2.

30    **1.1.3   RVAAP History**

31    Production at the facility began in December 1941 with the primary missions of  
32    depot storage and ammunition loading. The installation was divided into two  
33    separate units - the Portage Ordnance Depot and the Ravenna Ordnance Plant. The  
34    Portage Ordnance Depot's primary mission was storage of munitions and  
35    components, while the mission of the Ravenna Ordnance Plant was loading and  
36    packing major caliber artillery ammunition and the assembly of munitions initiating  
37    components that included fuzes, boosters and percussion elements. In August

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1 1943, the installation was re-designated the Ravenna Ordnance Center and again in  
2 November 1945 as the Ravenna Arsenal. The plant was placed in standby status in  
3 1950 and operations were limited to renovation, demilitarization and normal  
4 maintenance of equipment, along with storage of ammunition and components.

5 The plant was reactivated during the Korean Conflict to load and pack of major  
6 caliber shells and components. All production ended in August 1957, and in October  
7 1957 the installation was again placed in a standby condition. In October 1960, the  
8 ammonium nitrate line was renovated for demilitarization operations which involved  
9 melting explosives out of bomb casings for subsequent recycling. These operations  
10 commenced in January 1961. In July 1961, the plant was again deactivated. In  
11 November 1961, the installation was divided into the Ravenna Ordnance Plant and  
12 an industrial section, with the entire installation then being designated as the  
13 RVAAP.

14 In May 1968, RVAAP began loading, assembling, and packing munitions on three  
15 load lines (LLs) and two component lines in support of the Southeast Asia Conflict.  
16 These facilities were deactivated in August 1972. The demilitarization of the M71A1  
17 90-millimeter (mm) projectile extended from June 1973 until March 1974.  
18 Demilitarization of various munitions was conducted from October 1982 through  
19 1992.

20 Until 1993, RVAAP maintained the capability to load, assemble and pack military  
21 ammunition. As part of the RVAAP mission, the inactive facilities were maintained in  
22 a standby status by keeping equipment in a condition to permit resumption of  
23 production within prescribed limitations. In September 1993, the RVAAP was placed  
24 in inactive caretaker status, and subsequently changed to modified caretaker status.  
25 The LLs and associated real estate were determined to be excess by the Army.

26 A total of 20,403 acres of the former 21,683 acre RVAAP was transferred to the  
27 United States Property and Fiscal Officer (USP&FO) for Ohio for use by OHARNG as  
28 a military training site. The current RVAAP consists of 1,280 acres in several distinct  
29 parcels scattered throughout the RTLS. The RVAAP and RTLS are co-located on  
30 contiguous parcels of property. The RTLS perimeter fence encloses both  
31 installations.

**32 1.2 PROJECT DESCRIPTION AND GENERAL SCOPE**

33 During the course of the Installation Restoration Program (IRP) at the RVAAP,  
34 various MPPEH items were found and stored in ECMs 7-C-4 and 1501 for future  
35 disposal. The SOW provides for the inspection and categorization, "Safe"  
36 certification, recycle and disposal of these MPPEH items. Additionally, the SOW  
37 provides for the inspection of the four (4) RVAAP clean-hard fill sites in order to

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1 evaluate the current site conditions and identify the types of materials present  
2 relative to planned future closure under a separate contract. A copy of the SOW is  
3 presented in Appendix A.

4 **1.3 OBJECTIVE**

5 The objective of this project is to detail the inspection and categorization of the  
6 MPPEH items that are stored at the RVAAP ECM 7-C-4 and 1501 for "Safe"  
7 certification and offsite disposal and recycling. The items were recovered by various  
8 contractors during previous Munitions and Explosives of Concern (MEC) clearance,  
9 sifting and removal operations at the Atlas Scrap Yard, Load Line 1 and the  
10 Winklepeck Burning Grounds (WBG) at the RVAAP. The MPPEH items recovered over  
11 time by various contractors are currently stored in ECM 7-C-4 in the C-Block Area  
12 and ECM 1501 at the ODA2 area. This WP will ensure compliance with requirements  
13 of the U.S. Department of Army and Ohio Environmental Protection Agency (Ohio  
14 EPA). Also, an inspection and preparation of recommendations and cost estimates in  
15 order to close out the RVAAP clean-hard fill sites will be performed.

16 The objective will be achieved by:

- 17 • Performance of a 100 percent (%) inspection of MPPEH and categorizing  
18 them according to the process required to acquire a "Safe" certification.  
19 These classifications will be:
  - 20 ○ Munitions Debris (MD) – No further processing required and certified  
21 as "Safe" for offsite recycling or disposal,
  - 22 ○ MPPEH that requires thermal flashing for "Safe" certification and
  - 23 ○ MPPEH that requires an explosive venting, desensitization or disposal  
24 procedure for "Safe" certification.
- 25 • MD and scrap items categorized as items that required no further action for a  
26 "Safe" certification will be sent offsite for recycling or disposal in accordance  
27 with (IAW) all required Federal, State, and local laws, rules and regulations.
- 28 • MPPEH items categorized as items that require specialized processing such as  
29 thermal flashing or explosive desensitization in order to achieve a "Safe"  
30 certification is outside the scope of this contract, so material of this nature  
31 will be placed back into storage. MPPEH items segregated and categorized as  
32 needing thermal flashing will be re-stored in ECM 7-C-4 and MPPEH items  
33 segregated and categorized as needing explosive venting, desensitization or  
34 disposal will be re-stored in ECM 1501 for secure storage. All MPPEH re-  
35 stored in both ECMS will be properly disposed and/or flashed at a later date  
36 under a separate contract.



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- 1       • Conduct regulatory reviews and site inspections at the four (4) RVAAP clean-  
 2       hard fill sites in order to evaluate the current site conditions and identify the  
 3       types of material present relative to planned future closure under a separate  
 4       contract. Following site inspections, PIKA will prepare a report to detail the  
 5       available closure options and provide recommendations; including  
 6       explanations of required testing and/or disposal of existing materials that  
 7       may be required to properly close the sites. A cost estimate for the  
 8       recommended closure option will also be included as part of the final report.

9       All work executed must be accomplished in a manner which ensures the health and  
 10       safety of the workforce and the public at large. As such, all work will be completed  
 11       IAW the SOW (Appendix A), this Site-Specific WP with its integral Accident  
 12       Prevention Plan (APP), and applicable Federal, State and Local rules, laws and  
 13       regulations.

14       PIKA will execute the project in a manner that minimizes the environmental impact  
 15       to the site and its surroundings. If PIKA encounters any environmentally sensitive  
 16       site features that could affect cost or schedule under the current SOW, PIKA will  
 17       immediately notify the RVAAP FM. The RVAAP FM will notify the Ohio EPA as needed  
 18       and await further direction. PIKA will use reasonable caution to avoid actions that  
 19       could disturb these features.

20       **1.4       CHANGES TO THE WORK PLAN**

21       This WP was prepared after a review of archival data, study of prior investigations,  
 22       discussions with the RVAAP Facility Manager and BRACO personnel, and a thorough  
 23       evaluation of the site. The WP is based on the information available at the time of  
 24       its preparation and may require modification if unforeseen circumstances arise  
 25       during the execution of this WP. Should the WP require modification, changes will  
 26       be made using the following procedures:

- 27       • Under no circumstances will any change to the approved WP be executed  
 28       without prior approval of the RVAAP Facility Manager, BRACO and the PIKA  
 29       Program Manager (PM).
- 30       • The PIKA Project Manager (PjM) will notify the PIKA PM of the required  
 31       changes and the rationale for the changes.
- 32       • The PIKA PM will develop the changes in conjunction with the RVAAP Facility  
 33       Manager and BRACO.
- 34       • Changes to this WP will be provided in writing by PIKA to the RVAAP Facility  
 35       Manager for approval.

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- 1
  - 2
  - 3
- On-site implementation of changes will be initiated prior to inclusion of the formal written changes, if verbal approval is provided to PIKA by the RVAAP Facility Manager.

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1 **2.0 TECHNICAL MANAGEMENT PLAN**

2 **2.1 GENERAL**

3 This section of the WP addresses specific field-level approach and procedures that  
4 PIKA will employ during this Munitions Response (MR) at RVAAP to include  
5 mobilization; site preparation; MPPEH inspection and categorization, "Safe"  
6 certification, recycle and disposal; demobilization and document preparation in  
7 support of the ultimate completion of this MR.

8 **2.2 GUIDANCE, REGULATIONS, AND POLICY**

9 The work conducted under this SOW will be performed within the relevant  
10 requirements presented in Occupational Safety and Health Administration (OSHA)  
11 Hazardous Waste Operations and Emergency Response (HAZWOPER) standards  
12 found in the 29 Code of Federal Regulations (CFR) 1910, 1926 and 1904, and the  
13 referenced documents contained in Section 7.0 of this WP. An Explosive Safety  
14 Submission (ESS) has been prepared and will be submitted to the Department of  
15 Defense Explosives Safety Board (DDESB) for approval. Work will only commence  
16 after receipt of final written approval by DDESB.

17 **2.3 RECOVERED CHEMICAL WARFARE MATERIEL**

18 RVAAP is on the Non-stockpile Chemical Material Project list (NSCMP) due to the  
19 suspected Mustard Agent Burial Site. It should be noted however that the Suspected  
20 Mustard Agent Burial Site is not in the areas where work will be conducted under  
21 this contract. The U.S. Army Technical Escort Unit (TEU) at Aberdeen Proving  
22 Ground, Maryland will be contacted in the event that any item is located and  
23 suspected of containing Chemical Warfare Materiel (CWM). If a suspect CWM item is  
24 located, the PIKA PM will notify the BRACO PM who will make a determination  
25 whether or not US Army TEU support is necessary. In the event that US Army TEU  
26 is required, PIKA personnel will be stationed in a safe up-wind position to observe  
27 and secure the area until US Army TEU support arrives. The BRACO PM will be  
28 responsible for contacting any local law enforcement agencies needed to secure any  
29 public roads that require blocking or to evacuate local residents.

30 **2.4 PROCEDURES WHEN MEC CANNOT BE DESTROYED ONSITE**

31 Off site destruction of MEC at RVAAP is not required. All demolition operations will  
32 be carried out under a separate contract and will take place at ODA2.

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1    **2.5    TECHNICAL SCOPE**

2    ***2.5.1    Project Site Layout***

3    PIKA has been contracted to inspect and categorize MPPEH currently stored in ECM  
4    7-C-4 and 1501 at the RVAAP. PIKA has also been contracted to inspect and prepare  
5    recommendations and cost estimates in order to close out the RVAAP clean-hard fill  
6    sites. PIKA will accomplish these tasks as described in the following paragraphs.

7    ***2.5.2    Operational Sequence Overview***

8    The intent of this project is to inspect and categorize MPPEH stored at ECM 7-C-4  
9    and 1501 at RVAAP in order to be segregated into three categories: 1) No further  
10   action required and certified "Safe" for offsite disposal and recycle, 2) MPPEH that  
11   requires thermal flashing for "Safe" certification and 3) MPPEH that requires an  
12   explosive venting, desensitization or disposal procedure for "Safe" certification.  
13   MPPEH requiring thermal flashing will be re-stored in ECM 7-C-4 and MPPEH  
14   requiring explosive procedures will be re-stored in ECM 1501 to be handled under a  
15   separate contract at a later date. PIKA will also develop recommendations and cost  
16   estimates for the closure of the RVAAP clean hard fill sites.

- 17       1.    Visual inspection and categorization of MPPEH
- 18       2.    Inspection and certification of MD and non-MD scrap
- 19       3.    Disposition of MD
- 20       4.    Conduct regulatory review and site inspections at the four (4) RVAAP  
21           clean-hard fill sites for planned future closure of the sites under a  
22           separate contract

23   **2.6    PROCEDURES FOR CHANGED SITE CONDITIONS**

24   In the event that the site conditions change, PIKA will notify the RVAAP Facility  
25   Manager (FM) to determine the impact of the change on site operations and project  
26   funding. The Ohio EPA will be notified in the event changes in the WP have an  
27   impact on environmental issues. All changes will be resolved and all changes to site  
28   plans will be generated, submitted, and approved prior to conducting tasks  
29   associated with the change.

30   **2.7    MANAGEMENT ROLES AND RESPONSIBILITIES**

31   In addition to PIKA, the project team consists of Mr. William O'Donnell, the BRACO  
32   PjM, Arlington, VA., and Mr. Mark Patterson, RVAAP FM and COR. Table 2-1  
33   identifies primary roles/responsibilities of PIKA personnel assigned to the project. All

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- 1 PIKA personnel assigned to this project meet the BRACO training and experience requirements for the positions to which they are assigned.
- 2

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1 **TABLE 2-1: KEY PROJECT PERSONNEL**

<b>Title/Name</b>	<b>Responsibilities</b>
Program Manager (PM) <i>Shahrukh Kanga, CHMM</i>	<ul style="list-style-type: none"> <li>- Ensures resources are available</li> <li>- WP/APP Review</li> <li>- Conflict Resolution/Stop Work</li> </ul>
UXO Quality Assurance/Quality Control Manager (QA/QCM) <i>Gerry Stone</i>	<ul style="list-style-type: none"> <li>- Manages the QA Organization</li> <li>- Maintains the QA Program</li> <li>- Approves QA required documents</li> </ul>
Project Manager (PJM) <i>Brian Stockwell</i>	<ul style="list-style-type: none"> <li>- Responsible Project Budget</li> <li>- Resolve Regulatory-Level Issues</li> <li>- WP preparation</li> <li>- APP Review</li> <li>- Notification</li> <li>- Conflict Resolution/Stop Work</li> </ul>
Corporate Environmental Safety and Health Manager (CESHM) <i>Drew Bryson, CIH, MPH</i>	<ul style="list-style-type: none"> <li>- APP Preparation and Approval</li> <li>- APP Review and Implementation Audits</li> <li>- APP Modification/Deviation Recommendation</li> <li>- Conduct/assist with site, task &amp; hazard specific training</li> <li>- Conflict Resolution/Stop Work</li> </ul>
Site Supervisor (SS)/Senior UXO Supervisor (SUXOS) <i>Lew Kovarik</i>	<ul style="list-style-type: none"> <li>- APP/SSHP Review</li> <li>- APP/SSHP &amp; Work Plan implementation</li> <li>- Notification</li> <li>- Conflict resolution/stop work</li> </ul>
Site Safety and Health Officer (SSHO)/UXO Safety Officer (UXOSO) <i>Melvin Lau</i>	<ul style="list-style-type: none"> <li>- APP &amp; WP Implementation</li> <li>- Documentation/Reporting</li> <li>- Asbestos Notifications</li> <li>- Coordinate and Manage ACM removal operations</li> <li>- Visual Inspection and Certification for asbestos clearance</li> <li>- Safety Inspection</li> <li>- Site Safety Control</li> <li>- Accident Prevention</li> <li>- Conflict Resolution/Stop Work</li> </ul>
UXO Quality Control Specialist (UXOQCS) <i>Donald Gerard</i>	<ul style="list-style-type: none"> <li>- APP &amp; WP Implementation</li> <li>- Documentation/Reporting</li> <li>- Site Inspections</li> <li>- Safety Inspection</li> <li>- Inspection and certification for scrap metal</li> <li>- Accident Prevention</li> <li>- Conflict Resolution/Stop Work</li> </ul>
Field Personnel – To be determined	<ul style="list-style-type: none"> <li>- APP Adherence</li> <li>- Accident Prevention</li> </ul>

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1    **2.7.1    Program Manager (PM)**

2    Mr. Shahrukh Kanga, Principal of PIKA is the PM for this project. Mr. Kanga will  
3    manage the PIKA resources needed for site operations and is responsible for the  
4    overall implementation of the project. Mr. Kanga has over 16 years of technical and  
5    management experience with environmental and explosive remediation projects.

6    **2.7.2    UXO Quality Assurance/Quality Control Manager (UXO QA/QCM)**

7    Mr. Gerald Stone is the UXO QA/QCM for this project. Mr. Stone has substantial  
8    experience in the management of environmental projects involving UXO and MEC  
9    and will have the following responsibilities:

- 10       • Fosters a culture of excellence for quality;
- 11       • Manage the QA organization and maintain the Quality Assurance Program  
12       (QAP);
- 13       • Approve QA requirement documents, project and program implementing  
14       procedures and subcontractor QAP;
- 15       • Ensure all personnel are properly trained and adequately experienced for  
16       their duties; and
- 17       • Performance of all required duties listed in Quality Control Plan Section of this  
18       WP concerning the QAP.

19   **2.7.3    Project Manager (PjM)**

20   Mr. Brian Stockwell is the PjM for this project. Mr. Stockwell has substantial  
21   experience in the management of environmental remediation projects and will have  
22   the following responsibilities:

- 23       • Managing the funding, manpower, and equipment necessary to conduct site  
24       operations.
- 25       • Acting as the point of contact (POC) for communicating with the RVAAP FM  
26       and Ohio EPA.
- 27       • Overseeing the overall performance of all PIKA individuals assigned to the  
28       project.
- 29       • Reviewing the SOW and ensuring that necessary elements are addressed in  
30       project plans.
- 31       • Coordinating all contract and subcontract work and controlling costs and  
32       schedules.

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1    **2.7.4   Corporate Environmental Safety and Health Manager (CESHM)**

2    Mr. Drew Bryson is the PIKA Corporate Environmental Safety and Health Manager  
3    (CESHM). Mr. Bryson is a board certified industrial hygienist (CIH) with over 18  
4    years of industrial hygiene, safety, and hazardous waste experience, including over  
5    16 years experience working on projects with MEC contamination. During this  
6    project, Mr. Bryson will provide occupational safety and health management duties  
7    as presented in detail in the APP for this project.

8    **2.7.5   Senior UXO Supervisor (SUXOS)**

9    The SUXOS (Mr. Lew Kovarik) is the senior UXO Technician onsite. He controls  
10   operations of all field teams performing MEC activities and will spend most of the  
11   day in the field monitoring their performance and helping them achieve maximum  
12   operational safety and efficiency. He reports directly to the Project Manager. He will  
13   implement the approved plans in the field and must review and approve any  
14   changes. He supervises all UXO teams on a project. The SUXOS is authorized to  
15   temporarily stop work to correct an unsafe condition or procedure. The SUXOS will  
16   meet or exceed the requirements for that position as presented in the DDESB  
17   approved “UXO Personnel Training and Experience Hierarchy” found in Technical  
18   Paper Number 18 - Minimum Qualifications for Unexploded Ordnance (UXO)  
19   Technicians and Personnel, 2004.

20   **2.7.6   Site Site Safety and Health Officer (SSHO)/UXO Safety Officer**  
21    **(UXOSO)**

22   Mr. Melvin Lau is the Site Safety and Health Officer (SSHO)/UXO Safety Officer  
23   (UXOSO) for this project. The Safety Officer will be responsible for the operational  
24   items listed below in addition to the safety and health responsibilities:

- 25       • Issuing and/or approving “Stop Work” orders for safety and health reasons.
- 26       • Conducting on-site safety and health training for PIKA and subcontractor  
27       personnel.
- 28       • Identifying and evaluating any known or potential safety problems that may  
29       interfere with or interrupt site operations and endanger site personnel.
- 30       • Consulting with the PjM on identifying and implementing any necessary  
31       safety-related corrective actions.
- 32       • Coordinating with the PjM for the implementation of the safety requirements  
33       in the APP.



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- 1       • Ensuring that all site activities are conducted IAW this WP and relevant  
2       Federal and State rules, laws and regulations.

3       **2.7.7 UXO Quality Control Specialist (UXOQCS)**

4       Mr. Donald Gerard is the UXOQCS for this project. As the UXOQCS, Mr. Gerard will  
5       have the responsibility of ensuring that all site deliverables meet the requirements  
6       of the SOW.

7       **2.7.8 Field Team(s)**

8       Technicians assigned to this project as field staff will be responsible to adhere to the  
9       approved APP, WP, ESS and incorporate accident prevention.

10      **2.7.9 Functional Relationships**

11      The PIKA PjM will interact with the RVAAP FM for all matters concerning  
12      management and the SOW. All contract-related issues will be reported directly to  
13      the RVAAP FM for consideration and/or approval. The PIKA PjM will report directly to  
14      the PIKA PM. The PIKA SUXOS will report directly to the PIKA PjM for all matters  
15      concerning site operations. PIKA Team Leaders will report directly to the SUXOS and  
16      the team members will report directly to their respective leader. Regarding safety  
17      issues, the UXOSO/SSHO will have direct access to and will report functionally to the  
18      CESHM. For matters concerning QC, the UXOQCS will have direct access to and will  
19      report functionally to the PIKA UXO QA/QCM. The UXOSO and UXOQCS will report  
20      administratively to the SUXOS.

21      **2.8 OVERALL SAFETY PRECAUTIONS AND PRACTICES**

22      PIKA will conduct safety and operational briefings daily. Additionally, the SUXOS,  
23      UXOSO/UXOQCS may hold a safety stand-down to conduct training, at any time a  
24      deviation or degradation of safety warrants a review. The safety and operational  
25      training and briefings will be performed IAW the Site Safety and Health Plan (SSHP)  
26      for this project as summarized below:

- 27      • **Daily Safety Briefing:** Each day, prior to the commencement of work, a  
28      safety briefing will be conducted for all site personnel by the UXOSO/UXOQCS  
29      pr SUXOS. A written record of this meeting will be maintained in the PIKA  
30      Safety Meeting Attendance Log. The briefing will focus on specific daily  
31      hazards, potential hazards and risks that may be encountered, and the safety  
32      measures that should be used to eliminate or mitigate those hazards. These  
33      briefings will provide personnel with the known or potential task-specific  
34      hazards related to the day's operation. The Activity Hazard Analysis (AHA)s

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1 forms will be available and used during the safety briefing to inform  
2 personnel of the task-related hazards. The AHA will be used to inform  
3 personnel of the Personal Protective Equipment (PPE) and safe work practices  
4 that will be used to mitigate the task hazards.

5 • **Visitor Safety Brief:** All visitors entering the site must report to the SUXOS  
6 and sign the visitor’s log. Visitors shall be given a safety briefing, as outlined  
7 in the SSHP, prior to entering any work area. Visitors shall be escorted at all  
8 times by a UXO-qualified individual.

9 • **Environmental Concerns:** The promotion of environmental sensitivity will  
10 be an ongoing part of the daily safety and operational briefs.

11 • **UXO Refresher:** All UXO personnel will be given UXO refresher training by  
12 the UXOSO/UXOQCS or SUXOS, on the known explosives to be encountered  
13 on site, including the identification of the MEC, the hazards, and the disposal  
14 methods.

15 • **Additional Training:** The SSHP prepared for this project details additional  
16 on-site training.

17 **2.9 COMPLIANCE WITH PLANS AND PROCEDURES**

18 All personnel will adhere strictly to approved plans and established procedures. If  
19 operational parameters change and there is a corresponding requirement to change  
20 procedures or routines, careful evaluation of such changes will be conducted by on-  
21 site supervisory personnel. Any new course of action or desired change in  
22 procedures will be submitted in writing along with justification for approval.  
23 Approved written changes will be implemented in a manner that will ensure  
24 procedural uniformity and end-product quality.

25 **2.10 GENERAL SITE PRACTICES**

26 All operational activities at RVAAP will be performed under the supervision and  
27 direction of qualified UXO personnel (certification IAW DDESB TP-18). Non-UXO  
28 qualified personnel will be prohibited from performing any operation unless they are  
29 accompanied and supervised by a UXO technician. Throughout the entire project,  
30 PIKA personnel will adhere to the following general practices.

31 • **Work Hours:** Operations will be conducted only during daylight hours. PIKA  
32 intends to work four 10-hour days with an optional schedule of five 8-hour  
33 days. However, due to operational needs, PIKA may decide to work more  
34 than 40 hours in a week. Additionally, a minimum 48-hour rest period will be  
35 provided before the start of the next work week.

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- 1 • **Basic MEC Procedures and PIKA Environmental Safety and Health**  
2 **Procedures (ESHP):** During site operations PIKA personnel will adhere to  
3 the operational and ES&H procedures outlined in the ESHPs referenced and  
4 presented in the APP.
- 5 • **Site Access:** PIKA will control access to all work areas. Access will be limited  
6 to only those personnel required to accomplish the specific operations or to  
7 those personnel who have a specific purpose and authorization to be on the  
8 site. No hazardous MEC operations will be conducted when non-UXO or  
9 unauthorized personnel are inside the defined minimum separation distance  
10 (MSD) zone.
- 11 • **Handling of MEC:** Only UXO-qualified personnel and UXO Technicians as  
12 defined in DDESB Technical Paper 18 will handle MEC items.
- 13 • **Visitor Safety:** All visitors entering the site will report to the PIKA field office  
14 and sign the visitor's log. All site visitors shall receive a safety briefing, as  
15 outlined in the SSHP, and visitors will be escorted at all times by UXO  
16 personnel when inside the MEC area.

17 **2.11 SAFETY AND OPERATIONAL TRAINING AND BRIEFING**

18 PIKA will conduct safety and operational training on a daily basis starting with the  
19 morning briefing. Daily safety training will typically be conducted by the  
20 UXOSO/UXOQCS; however, with regards to safety, PIKA solicits and welcomes  
21 comments and input from all employees. The SUXOS will also conduct operational  
22 training sessions and briefings. This training will address team assignments,  
23 potential problems and their respective resolutions and productivity status.

24 **2.12 MOBILIZATION AND SITE PREPARATION**

25 ***2.12.1 Mobilization of Manpower***

26 PIKA will schedule the arrival of the work force in a manner designed to facilitate  
27 immediate productivity. All PIKA personnel mobilized to the site will meet  
28 requirements for OSHA hazardous waste operations training and medical  
29 surveillance requirements as specified in the APP/SSHP. Site personnel will also be  
30 trained to perform the specific tasks to which they are assigned. At no time will site  
31 personnel be tasked with performing an operation or duty for which they do not  
32 have appropriate training and experience.

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1     **2.12.2 Preliminary Activities**

2     During the initial mobilization, PIKA site management personnel will engage in the  
3     following preliminary activities:

- 4         • Coordination with the designated RVAAP FM to finalize access requirements,  
5         location of any temporary facilities to be used, and communications  
6         requirements;
- 7         • Contact and coordination with RVAAP FM and local fire, medical, and other  
8         emergency services to ensure availability of services, and the appropriate  
9         response actions IAW the WP and APP;
- 10        • Contact and coordination with local vendors for accommodations as well as  
11        vendors/suppliers for routine purchases to ensure smooth project start up;  
12        and
- 13        • Inspection of each work area to identify possible environmental constraints,  
14        terrain limitations, and other interferences.

15    **2.12.3 Equipment**

16    All equipment will be inspected as it arrives to ensure it is in proper working order.  
17    Any equipment found damaged or defective will be repaired or returned to the point  
18    of origin, and a replacement will be secured. All instruments and equipment that  
19    require routine maintenance and/or calibration will be checked initially upon its  
20    arrival and then checked again prior to its use each day. This system of checks  
21    ensures that the equipment is functioning properly. If an equipment check indicates  
22    that any piece of equipment is not operating correctly, and field repair cannot be  
23    made, the equipment will be tagged and removed from service. A request for  
24    replacement equipment will be placed immediately. Replacement equipment will  
25    meet the same specifications for accuracy and precision as the equipment removed  
26    from service. PIKA UXO personnel use on-site communication radios IAW  
27    Department of Army (DA) Pamphlet (PAM) 385-64, Section IV, Sub-section 6-15,  
28    which states the general requirements to include the minimum safe separation  
29    distances required. As part of the initial equipment set-up and testing, PIKA will also  
30    install and test its communication equipment that includes the following:

- 31        • Cellular Phone Service to maintain communication with RVAAP security  
32        personnel.
- 33        • Hand-held portable radios used to maintain communications between the  
34        office trailer, PM/SUXOS, and the field teams.

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- 1       • Cellular telephones equipped with Direct Connect Service (very high  
2       frequency band) to be used as back up communications between the office  
3       trailer, SUXOS, and the field teams.

4       ***2.12.4 Site-Specific Training***

5       As part of the mobilization process, PIKA will perform site-specific training for all on-  
6       site personnel assigned to this project. The purpose of this training is to ensure that  
7       all on-site personnel fully understand the operational procedures and methods to be  
8       used by PIKA at RVAAP. Individual responsibilities and safety and environmental  
9       concerns associated with operations will also be covered in the training. The  
10       SUXOS/UXOSO will conduct the training sessions which will include the topics  
11       identified below.

- 12       • Field equipment operation, including the safety and health precautions, field  
13       inspection and maintenance procedures that will be used.
- 14       • Interpretation of relevant sections of this WP and APP/SSHP as they relate to  
15       the tasks being performed.
- 16       • Personnel awareness of potential site and operational hazards associated with  
17       site-specific tasks and operations.
- 18       • Public relations to ensure that personnel will not make any public statements  
19       to the media without prior coordination with and approval of the RVAAP FM.
- 20       • Environmental concerns and sensitivity including endangered/threatened  
21       species and historic, archeological, and cultural issues.
- 22       • Additional OSHA or BRACO required training as required by the APP.
- 23       • Identification features, hazards, and reporting procedures if ordnance is  
24       encountered.

25       ***2.12.5 Work Zone Set Up***

26       PIKA does not anticipate the installation of any facilities with the exception of work  
27       zones (WZ). In general the regulated work zones will include an exclusion zone  
28       (EZ), and support zone (SZ) for site access control during field operations.

29       Due to the relatively short duration of this project, as well as the proximity of the  
30       project site to the PIKA RVAAP field office, services such as water, telephone, and  
31       gas will not be installed at the work site. Potable water for decontamination of  
32       personnel and equipment (if needed) will be stored in portable poly containers.  
33       Cellular and two-way radios will be used for communications and emergency

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1 notifications. Temporary sanitary facilities will be mobilized to the site and  
2 maintained by local vendors.

3 Upon delineation of the work zones, site access control points will be established  
4 and site control and security will be implemented. This will consist of establishing  
5 barriers such as warning cones and yellow tape to control points of site access  
6 control. The UXOSO will be responsible for site access.

7 ***2.12.6 Project Notifications and Surveys***

8 ***2.12.6.1 Public Notification***

9 PIKA will not publicly disclose any data generated or reviewed under this contract.  
10 All requests for any public conveyance will be routed through the RVAAP FM in  
11 conjunction with the Public Affairs Office, BRACO and TACOM POC. PIKA will notify  
12 RVAAP FM prior to any contact with regulatory agencies.

13 ***2.12.6.2 Emergency Response and General Notifications***

14 At least one week prior to the initiation of field activities, PIKA will contact all local  
15 emergency services to verify the availability of requisite services and to confirm the  
16 means used to summon the services. General notifications will be made to key  
17 project personnel at this time as well. This includes the following contacts:

- 18 • RVAAP Security Dispatcher (Post 1) – (330)-358-2017
- 19 • Ravenna City Fire Department (330) 296-5783
- 20 • Ravenna Police Dept. – (330) 297-6486
- 21 • RVAAP Caretaker Contractor (PIKA International, Inc.) – (330) 358-3005
- 22 • Hospital – Robinson Memorial Hospital (330) 297-0811
- 23 • Police –Portage County Sheriff Office (330) 296-5100
- 24 • Police –Trumbull County Sheriff Office (330) 675-2508
- 25 • Ohio State Patrol – (330) 297-1441
- 26 • William O'Donnell –BRACO Project Manager (703) 601-1570
- 27 • Mark Patterson – RVAAP COR/Facility Manager (330) 358-7311
- 28 • Ohio EPA - Eileen Mohr (330) 963-1221
- 29 • OHARNG – MAJ Meade (614) 336-6560
- 30 • Katie Elgin – RTLS Environmental Specialist (614) 336-6136
- 31 • Local News Media

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1     **2.12.7 Tenant Relocation**

2     PIKA will work with the RVAAP FM to minimize any effect of performing the tasks  
3     outlined in this WP. The on-site inspection and categorization of MPPEH operations  
4     require a 378 foot diameter EZ. Per the ESS, all non-essential personnel to the  
5     MPPEH operations, which include (emergency response vehicles, any employees  
6     working within the area) will comply with the approved Explosive Safety Quantity-  
7     Distance (ESQD) arcs. In the event that tenants/workers require relocation PIKA will  
8     coordinate with RVAAP FM.

9     **2.13 OPERATIONAL SEQUENCE FOR MPPEH INSPECTION AND**  
10    **CATEGORIZATION, CERTIFICATION, RECYCLE AND DISPOSAL**

11    The following is the general operational sequence PIKA will undertake to conduct  
12    the inspection and categorization, certification, recycle and disposal of MPPEH at  
13    ECM 7-C-4 and 1501 at RVAAP.

- 14           1. Visual Inspection and Categorization of MPPEH  
15           2. Inspection and Certification of MD and non-MD scrap  
16           3. Disposition of MD

17    **2.13.1 Visual Inspection and Categorization of MPPEH Stored In ECM 7-C-**  
18    **4 and ECM 1501**

19    Containers used to store MPPEH and all loose stored MPPEH in ECMs 7-C-4 and  
20    1501 located at RVAAP will be 100% inspected and certified "Safe" IAW Department  
21    of Defense (DoD) Instruction (DoDI) 4140.62 and Chapter 14 of Engineering Manual  
22    (EM) 1110-1-4009. Containers will be removed from the applicative ECM for  
23    inspection and categorization operations. MPPEH will be twice visually inspected and  
24    categorized into three separate piles:

- 25           1) MD with no further action required to obtain a "Safe" certification.  
26           2) MPPEH that requires thermal flashing for "Safe" certification.  
27           3) MPPEH that requires an explosive venting, desensitization or disposal  
28           procedure for "Safe" certification.

29    Procedures listed below will be followed for the turn in/recycling of the no further  
30    action items. MPPEH items requiring thermal flashing will be re-stored in ECM 7-C-4  
31    and MPPEH items requiring explosive venting, desensitization or disposal will be re-  
32    stored in ECM 1501 to be disposed/treated at a later date under a separate contract.

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1     **2.13.2 Inspection and Certification of MD and non-MD Scrap**

2     Items inspected per above section 2.13.1 and are scrap metal, casings, fragments  
3     and related items will be 100% inspected for absence of explosive materials and  
4     properly secured in lockable containers. All metal will undergo the  
5     inspection/certification process described below:

- 6         • UXO Technician II will perform a 100% inspection of each item and  
7         determine if the item contains explosives hazards.
- 8         • UXO Technician III will perform a 100% re-inspection of all items to  
9         determine if free of explosives hazards.
- 10        • UXOQCS will conduct daily audits of the procedures used by UXO teams and  
11        individuals for processing MD and non-MD scrap. The UXOQCS will then  
12        perform a 10% random sampling of all MD and non-MD scrap to ensure that  
13        no items with explosives hazards exist as required for completion of the  
14        Requisition and Turn-In Document, DD Form 1348-1A. Additionally, the  
15        UXOQCS will verify that the metal inspection process has been followed.
- 16        • The SUXOS will perform a 100% re-inspection of all items and complete a  
17        Requisition and Turn-In Document, DD Form 1348-1A for all MD to be  
18        transferred for final disposition. The following certification/verification will be  
19        entered on each DD Form 1348-1A:

20                 *"This certifies and verifies that Munitions Debris and/or Explosive  
21                 Contaminated Property listed has been 100 percent properly  
22                 inspected and to the best of our knowledge and belief, are free of  
23                 explosive hazards"*

- 24        • The SUXOS will sign as the certifier and the UXOQCS will sign as the verifier.  
25        The form will be properly annotated with the following declaration and  
26        accompany the shipment.

27     **2.13.3 Disposition of Munitions Debris**

28     MD scrap metal will be disposed of at a recycler where the material will be  
29     processed through a smelter prior to resale. PIKA will document the transport and  
30     transfer of the MD and non-MD scrap using a chain of custody process already in  
31     place at RVAAP.

32     **2.13.4 Inspection and Recommendation for Clean Hard-Fill Sites**

33     PIKA will conduct a regulatory review and a non-intrusive inspection of the existing  
34     clean hard-fill sites located at RVAAP. Upon the completion of the visual inspection,



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1 PIKA will develop a most practical recommendation to include cost estimates for the  
2 performance of close out operations to the inspected and existing clean hard-fill  
3 sites located at RVAAP. PIKA will prepare a final report that will address the  
4 following at a minimum:

- 5 • Testing and disposal of contaminants (e.g., Polychlorinated biphenyl (PCB),  
6 lead etc.) that would require regulatory compliance;
- 7 • Removal of physical hazards (e.g., exposed re-bar and like items);
- 8 • Consolidation of materials to central locations, stabilizing the fill sites, capping  
9 and seeding of the disturbed areas;
- 10 • Various options for the closure of sites with justification that provides an  
11 aesthetically pleasing topography; and
- 12 • Cost estimates for each closure option.

13 **2.14 STATISTICAL SAMPLING**

14 No statistical sampling will be performed during these activities.

15 **2.15 PROCEDURES FOR REPORTS AND DISPOSITION OF MEC/MPPEH**

16 Weekly and Monthly reports and manpower reports containing procedures on the  
17 inspection and categorization, certification, recycle and disposal of MPPEH will be  
18 provided IAW the SOW for this project.

19 **2.16 RECORD KEEPING/ACCOUNTABILITY**

20 The SUXOS has overall responsibility for the accountability of all MPPEH/MD/non-MD  
21 scrap inspected and categorized.

22 **2.17 MEC TRANSPORTATION**

23 No MEC transportation will be performed during these activities.

24 **2.18 COLLECTION POINTS**

25 There will be no collection points associated with this project.

26 **2.19 DISPOSITION TECHNIQUES**

27 ***2.19.1 MEC Disposal and Site Control***

28 There is no MEC disposal for this project.

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1     **2.19.2 MPPEH**

2     All MPPEH will be handled IAW the procedures of Chapter 14 of EM 1110-1-4009  
3     and DoDI 4140.62. Furthermore, the UXOQCS will be responsible for conducting  
4     Quality Control (QC) checks and surveillances of the procedures used for processing  
5     and certifying metal scrap throughout the field operations. The UXOQCS will  
6     perform visual inspections and random EXPRAY screening on every container of  
7     scrap generated to ensure no items of dangerous or explosive nature are identified  
8     as “hazard free”. All QC surveillance will be documented on “Safe” certification  
9     tracking reports.

10    A “Safe” certification letter will be submitted to the recycling/salvage facility prior to  
11    the transport of any scrap and the certification letter will also accompany the  
12    shipment of scrap to the recycling/salvage facility. The letter will contain the  
13    following language to certify the scrap has been properly inspected and certified as  
14    free of explosive hazards:

15             *“This certifies that the metal scrap listed has been 100% properly*  
16             *inspected and to the best of our knowledge and belief, is inert*  
17             *and/or free of explosives or related material”.*

18    The letter will include the following information: material origin, or source, the level  
19    of decontamination achieved, the decontamination method(s) used, the  
20    decontamination completion date, and the signatures of the SUXOS and the  
21    UXOSO/UXOQCS. The RVAAP FM will sign as the verifier.

22    **2.20 DEMOBILIZATION**

23    Upon completion of the tasks covered under this SOW, PIKA will demobilize from  
24    the site. The demobilization activities will consist of the following steps:

- 25        1. Remove/demobilize all PIKA equipment.
- 26        2. Demobilize any other remaining equipment and supplies.

27    **2.21 PUBLIC AFFAIRS AND COMMUNITY RELATIONS**

28    PIKA personnel will not make available or publicly disclose any data generated or  
29    reviewed under this contract. When approached by any person or entity requesting  
30    information about the subject of this or any contract, PIKA personnel will defer to  
31    the RVAAP Public Affairs Office, and notify the RVAAP FM for response.

32    **2.22 PROJECT SCHEDULE**

33    PIKA has proposed a start date for field work for MPPEH inspection and  
34    categorization, certification, recycle and disposal operations at ECM 7-C-4 and 1501

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1 at RVAAP of April 13, 2009. The start date and schedule is contingent on the timing  
2 of document (WP, ESS and APP) review and approvals by the TACOM, BRACO and  
3 RVAAP FM, as well as coordination of activities with the RVAAP FM (See Project  
4 Schedule in Figure 5, Appendix B).

5 **2.23 WEEKLY/MONTHLY REPORTS**

6 PIKA will prepare and submit electronic copies of the weekly reports to the RVAAP  
7 FM and monthly reports to the RVAAP FM and United States Army Corps of  
8 Engineers (USACE). These progress reports will document the project activities  
9 conducted by PIKA in its' performance of the project tasks. The monthly reports will  
10 be submitted for receipt by the addressee by the 5<sup>th</sup> working day of each month.

11 ***2.23.1 RVAAP Master Schedule***

12 PIKA will supply a schedule for inclusion into the RVAAP master schedule. PIKA will  
13 participate in the bi-weekly schedule update meetings with USACE and the weekly  
14 contractor meeting held at RVAAP building 1037.

15 ***2.23.2 Contractor Manpower Report***

16 PIKA will comply with the requirements of the SOW for The Office of the Assistant  
17 Secretary of the Army (Manpower and Reserve Affairs) contractor manpower report.

18 **2.24 FINAL REPORT**

19 PIKA will prepare a Final Report no later than forty-five (45) working days after the  
20 completion of the field operations at RVAAP ECM 7-C-4 and 1501. PIKA will submit a  
21 draft report IAW the SOW to the RVAAP FM and OHANG for review and comments.  
22 Courtesy copies will be forwarded to USACE, USAEC, TACOM and BRACO. After  
23 PIKA receives reviews and addresses all comments on the draft report, a final report  
24 will be submitted.

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1 **3.0 EXPLOSIVES MANAGEMENT PLAN**

- 2 There is no Explosive Management Plan required for this WP as no acquisition,  
3 receipt, storage, transportation, inventory of explosives. There is no MEC/MPPEH  
4 disposal for this project.

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1    **4.0    EXPLOSIVE SITING PLAN**

2    **4.1    GENERAL**

3    This section contains explosive safety criteria for the MPPEH inspection and  
4    categorization, certification, recycle and disposal operations at ECM 7-C-4 and 1501,  
5    RVAAP. Procedures are applicable to all PIKA employees, clients and visitors  
6    entering the potential MEC/MPPEH work site and where explosives and related  
7    material are being stored.

8    PIKA employees will be alert to conditions that may become hazardous due to  
9    changing site conditions and reporting the situation to their immediate supervisor.  
10   Personnel will comply with the MPPEH inspection and categorization, certification,  
11   recycle and disposal procedures in effect at the site.

12   **4.2    MEC AREAS**

13   The MR operational areas associated with this WP include the following:

- 14       1. ECM 7-C-4;  
15       2. ECM 1501; and  
16       3. The areas adjacent to ECM 7-C-4 and 1501 where inspection and  
17       categorization will take place.

18   **4.3    MUNITION WITH THE GREATEST FRAGMENTATION DISTANCE**  
19    **(MGFD)**

20   The MGFD for the MPPEH inspection and categorization, certification, recycle and  
21   disposal operations conducted under this WP is the 105mm cartridge casing, which  
22   has a Net Explosive Weight (NEW) of 3 pounds (lbs) of Hazard Division (HD) 1.1  
23   explosives presently in storage awaiting disposition. If during inspection an item  
24   with a greater fragmentation distance is encountered, the MSD will be adjusted per  
25   DDESB Technical Paper (TP) 16, and an amendment to this ESS will be expeditiously  
26   submitted.

27   **4.4    MSD FOR INTENTIONAL DETONATIONS**

28   There are no intentional detonations for the operations covered under this WP, as  
29   no intentional detonations are authorized under the SOW.

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1 **4.5 MSD FOR UNINTENTIONAL DETONATIONS**

2 **4.5.1 MSD for Nonessential Personnel**

3 Since this type of detonation involves the accidental initiation of explosives due to  
4 heat, shock or friction during the handling of MPPEH and the MSD for nonessential  
5 personnel is the greatest distance of blast overpressure K40 distance or the  
6 calculated Hazard Fragmentation Distance (HFD). The MSD will be determined  
7 between K40 (58 feet) distance and paragraph C9.4.1.2.1.1.1 of DoD 6055.09-STD  
8 under subparagraph C9.4.1.2.1.1.6 will be used to determine the HFD for  
9 unintentional detonation of bare explosives from the open inspection and  
10 categorization of MPPEH at ECM 7-C-4 and 1501. The MGFDF for this site has a 3 lbs  
11 NEW of HD 1.1, so the HFD calculated from DoD 6055.09-STD Table C9.T2 is 378  
12 feet, which is greater than the K40 (58 foot) distance; therefore the MSD for  
13 nonessential personnel will be 378 feet (Figure 3, Appendix B).

14 **4.5.2 Team Separation Distance (TSD)**

15 The TSD is based on blast overpressure as computed by the K40 distance formula  
16 for the MGFDF IAW DoD 6055.09-STD paragraph C12.5.8.3.2.1.2. The MGFDF for  
17 these operations has NEW of 3 lbs, so the K40 distance is 58 feet; therefore the TSD  
18 for this Munition Response Site (MRS) will be 58 feet.

19 **4.6 PLANNED OR ESTABLISHED DEMOLITION AREAS**

20 There are no planned or established demolition areas or collection points for this  
21 project.

22 **4.7 EXPLOSIVE STORAGE MAGAZINES**

23 **4.7.1 Magazine Type**

24 ECM 7-C-4 and 1501 at the RVAAP are standard 7-bar ECMs IAW DDESB TP 15  
25 (Figure 2, Appendix B).

26 **4.7.2 Magazine Contents**

27 The ECM 7-C-4 in the RVAAP C-Block explosive storage area (Figure 2, Appendix B)  
28 stores the listed containers of HD 1.1 MPPEH listed below awaiting inspection and  
29 categorization. Upon completion of inspection and categorization of the MPPEH, it  
30 will be used for the storage of MPPEH categorized as requiring thermal flashing for  
31 "Safe" certification. The C-Block is routinely inspected by RVAAP Security. The keys  
32 for 7-C-4 are maintained by RVAAP Security Personnel and the RVAAP COR/FM.  
33 Based on the types and amounts of HD 1.1 MPPEH items stored in ECM 7-C-4 as

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1 detailed below, a conservative estimate for the NEW for ECM 7-C-4 is 300 lbs NEW  
2 of HD 1.1 explosives.

3 **ECM 7-C-4 Inventory**

- 4 • 2 ea – 1CY (Gaylord) box containing approximately 7,000 152mm tracer  
5 elements.
- 6 • 1 ea – 1CY (Gaylord) box containing approximately 700 Point Detonating  
7 (PD) fuzes, 800 Base Detonating (BD) fuzes, 500 Proximity (VT) fuzes and  
8 3,500 pieces of Frag.
- 9 • 25 ea – 105mm cartridge casings
- 10 • 140 ea – Igniter tubes

11 The ECM 1501 located at the ODA2 site stores the listed containers of HD 1.1  
12 MPPEH listed below awaiting inspection and categorization. Upon completion of  
13 inspection and categorization of the MPPEH, it will be used for the storage of MPPEH  
14 categorized as requiring explosive venting, desensitization or disposal for “Safe”  
15 certification. Access to ODA2 is controlled by a security gate. Keys to both the  
16 security gate and ECM are maintained by RVAAP Security Personnel and the RVAAP  
17 COR/FM. Based on the types and amounts of HD 1.1 MPPEH items stored in ECM  
18 1501 as detailed below, a conservative estimate for the NEW for ECM 1501 is 300  
19 lbs NEW of HD 1.1 explosives.

20 **ECM 1501 Inventory**

- 21 • 1 ea – 55 Gallon Drum containing approximately 200 PD fuzes, 150 BD fuzes  
22 and 200 VT fuzes.
- 23 • 4 ea – 1 Cubic Yard (CY) (Gaylord) box containing approximately 7,500 152-  
24 mm tracer elements.
- 25 • 4 ea – 1 CY (Gaylord) box containing approximately 600 PD fuzes, 600 VT  
26 fuzes and 5,000 pieces of Frag.
- 27 • 1 ea – 152mm Ammo Box containing approximately 50 PD fuzes, 30 BD  
28 fuzes, 30 VT fuzes and 1,500 pieces of Frag.
- 29 • 25 ea – 105mm cartridge casings

30 ***4.7.3 Inhabited Building Distance (IBD) for Non-essential Personnel***

31 According to Chapter 12 paragraph C12.5.8.3.3.2 of DoD 6055.09-STD, non-  
32 essential personnel “in structures” shall be afforded protection equivalent to the IBD  
33 from storage locations. Non-essential personnel “in the open” shall be afforded

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1 protection equivalent to the Public Traffic Route Distance (PTRD) from storage  
2 locations.

3 ECM 7-C-4 and 1501: The IBD (Table C9.T1 of DoD 6055.09-STD) for HD 1.1,  
4 NEWQD of 300 lbs is 700 feet in the front and 250 feet to the side and rear. The  
5 PTRD are 420 feet to the front and 150 feet to the side and rear. There are no  
6 inhabited buildings or public traffic routes within these distances to MPPEH storage  
7 ECM 7-C-4 in the RVAAP C-Block and MPPEH storage ECM 1501 located at ODA2  
8 (Figure 4, Appendix B).

9 **4.7.4 Intermagazine Distance (IMD)**

10 No other ECMs or storage locations at RVAAP store explosives currently; therefore  
11 there are no required IMD for these operations.

12 **4.7.5 Engineering Controls for Public Exposures**

13 No engineering controls are needed since there are no public exposures within the  
14 Quantity-Distance (Q-D) for the magazine storage area.



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1 **5.0 GEOPHYSICAL PROVE OUT PLAN AND REPORT**

- 2 No subsurface digital geophysical mapping (DGM) will be performed as part of this  
3 Project.

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1 **6.0 GEOPHYSICAL INVESTIGATION PLAN**

- 2 No subsurface digital geophysical mapping (DGM) will be performed as part of this  
3 Project.

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1 **7.0 GEOSPATIAL INFORMATION & ELECTRONIC**  
2 **SUBMITTALS**

3 No geospatial information and electronic submittal tasks are associated with this  
4 Project.

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1 **8.0 WORK DATA AND COST MANAGEMENT PLAN**

2 **8.1 PROJECT MANAGEMENT APPROACH**

3 This Work, Data, and Cost Management Plans outline how the project work will be  
4 managed and accomplished. Items pertaining to cost control are in general terms  
5 for tasks awarded under TACOM, Rock Island, Illinois as a Firm Fixed Price (FFP)  
6 Task Order. PIKA internal data management will be conducted for project  
7 management purposes.

8 **8.2 PROJECT SCHEDULE**

9 PIKA has developed a proposed Project Schedule for the completion of all tasks  
10 presented in this WP. The Project Schedule is shown in Appendix B as Figure 5.

11 **8.3 PROJECT COST CONTROL AND TRACKING**

12 This is a fixed price contract and as such the cost control and tracking required by  
13 the government will be minimal. PIKA will utilize Primavera, Microsoft Project, or  
14 other cost and resource tracking software to ensure that the project costs are  
15 maintained within the proposed fixed price. In the event that unexpected and  
16 unplanned changes occur that have a significant cost impact, the PIKA PM will  
17 contact the RVAAP FM to evaluate any potential for changes to the fixed price based  
18 upon the cost differential associated with the project change.

19 **8.4 SUBCONTRACTOR COSTS**

20 PIKA will control subcontractor costs by using its approved accounting policies,  
21 which require acquisition of three quotes for any equipment or services charged to a  
22 project. To secure subcontractor services, PIKA will issue a request for proposal  
23 containing a SOW for the service needed that corresponds to the requirements of  
24 the client.

25 PIKA will select a subcontractor source on the basis of best value to PIKA and the  
26 Government, and the PIKA PM will subsequently review and approve all  
27 subcontractor invoices. The PIKA PM, in conjunction with the SUXOS, will monitor  
28 subcontractor progress to ensure effective completion of the subcontract.

29 **8.5 MANPOWER REQUIREMENTS**

30 PIKA will assign the personnel to the project on an as needed basis to ensure that  
31 the project is completed within the fixed price budget, on schedule and in a safe,  
32 efficient manner. The project management personnel assigned to this project are

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1 listed in Section 2.7 of this WP, and those personnel will be responsible for safe,  
2 successful project performance. For the performance of on-site operations, the PIKA  
3 SUXOS will be responsible and will track the manpower requirements for the project.  
4 This information will be transmitted and coordinated with the PIKA PM.

5 **8.6 RECURRING DELIVERABLES**

6 **8.6.1 Weekly and Monthly Update Reports**

7 PIKA will prepare and submit electronic copies of the weekly reports to the RVAAP  
8 FM and monthly reports to the RVAAP FM and USACE. These progress reports will  
9 document the project activities conducted by PIKA in its' performance of the project  
10 tasks. The monthly reports will be submitted for receipt by the addressee by the  
11 5th working day of each month.

12 PIKA will attend the weekly RVAAP contractors meeting at the RVAAP Headquarters  
13 (Building 1037) to coordinate with other contractors and the RTLS and the bi-weekly  
14 RVAAP schedule meeting for contractors and government agencies.

15 **8.7 DAILY PROGRESS REPORTS**

16 PIKA will prepare daily progress reports that will be maintained in the PIKA project  
17 office trailer for compilation of weekly and monthly reports. The daily report will be  
18 prepared using a form that provides for the collection of the relevant information for  
19 the project specific forms and reports.

20 **8.8 COMMUNICATIONS**

21 Project management communications for this project will generally be conducted as:

- 22 • **Field Tasks** – The SUXOS will communicate field inspection/categorization  
23 operation action information to the PIKA's PM, who in turn will inform the  
24 RVAAP FM.
- 25 • **Task Order Management** – PIKA's PM or other staff will address all task  
26 order management information (e.g., budgetary issues, change orders)  
27 directly to the RVAAP FM.

28 **8.9 RECORDS MANAGEMENT**

29 Hard copies of primary records for the site will be retained by PIKA. The records will  
30 include, but are not limited to:

- 31 • Task order and modification files
- 32 • Correspondence

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- 1       • Draft document submittals
- 2       • Responses to comments
- 3       • Final document submittals
- 4       During field investigations, records will be maintained in the PIKA field office.
- 5       Following completion of definable phases of work all files will be transferred to the
- 6       PIKA Corporate Office in Stafford, TX.

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- 1 **9.0 PROPERTY MANAGEMENT PLAN**
- 2 Not required under this task order.

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1 **10.0 QUALITY CONTROL PLAN**

2 **10.1 CORPORATE COMMITMENT TO QUALITY**

3 This Quality Control Plan (QCP), as a component of the PIKA Quality Assurance  
4 Program (QAP), provides the procedures for controlling and measuring the quality of  
5 all work performed during site activities at RVAAP.

6 This QCP has been developed to ensure compliance with appropriate industry and  
7 regulatory standards. It will be used to ensure activities related to this project are  
8 conducted in a planned and controlled manner, tasks conforms to contractual  
9 requirements, and appropriate documentation is generated to support each activity  
10 for which PIKA is responsible. All QC activities will be performed and documented  
11 IAW applicable professional and technical standards and RVAAP contract  
12 requirements.

13 It is PIKA policy to perform all work in conformance with applicable standards of  
14 quality. The procedures specified in the QCP will be considered minimum  
15 acceptable standards for PIKA. Additional requirements that exceed the strict  
16 procedures reflected in this QCP may be specified by the client or regulatory  
17 agencies and will be complied with. Procedures less stringent than those specified  
18 will not be adopted without prior written approval from the client and the PIKA  
19 Quality Program Management Team.

20 This QCP must be reviewed and formally approved before field operations  
21 commence. It is the personal responsibility of all personnel associated with this  
22 project to understand and maintain the quality issues applicable to their work  
23 assignments.

24 **10.2 QUALITY ASSURANCE/QUALITY CONTROL**

25 ***10.2.1 Quality Assurance***

26 Quality Assurance (QA) will be accomplished by the QA Manager (QAM), who will  
27 evaluate the field investigation activities. The purpose of the evaluation will be to  
28 ensure the field activities meet the specifications of the SOW and approved WP.

29 PIKA has a Corporate Management Plan that is documented and implemented  
30 through our QC Manual, and uses the three phases of inspection-Preparatory, Initial,  
31 and Follow-up phases of inspection, which are detailed in the site-specific QCP  
32 below.



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1    **10.3    SITE-SPECIFIC QUALITY CONTROL PLAN**

2    This QCP details the quality management procedures to be followed during the site  
3    activities at RVAAP. Site-specific information includes, but is not limited to, project  
4    personnel, definable features of work, required control operations, equipment tests,  
5    specific equipment calibration/response check procedures, audit procedures and  
6    client or regulatory agency requirements. This QCP provides procedures for:

- 7       • Determining compliance with this plan and all other elements of the WP;
- 8       • Determining the effectiveness of work performed;
- 9       • Inspecting the maintenance and accuracy of site records; and
- 10      • Testing, calibrating or response checking equipment used to perform tasks.

11   **10.4    QUALITY PROGRAM MANAGEMENT STRUCTURE**

12   The following section describes the structure of the quality management team for  
13   PIKA's operations at RVAAP. Personnel were selected based on previous experience  
14   and their familiarity with the PIKA QA/QC system. The project team will provide the  
15   specific technical and management capabilities and qualifications to perform the  
16   contract work.

17    ***10.4.1 Program Manager***

18   The PM is ultimately responsible for the effective implementation of the QCP for all  
19   field operations. The PM issues the Corporate Policy Statement and directs  
20   management and workers to follow the requirements of the QCP.

21   The PM has chosen to delegate QA authority as defined in the following paragraphs.  
22   Each designee is held accountable for delegated authorities.

23    ***10.4.2 Corporate QAM***

24   The QAM reports to the PM and has the authority and overall responsibility for  
25   independently verifying that quality is achieved. The QAM will:

- 26      • Foster a culture of excellence for quality;
- 27      • Manage the QA organization and maintain the QAP;
- 28      • Approve QA requirement documents, project and program implementing  
29         procedures, and subcontractor QAP;
- 30      • Assess the effective implementation of the QAP;
- 31      • Ensure that all personnel are properly trained and adequately experienced for  
32         the duties;

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- 1 • Establish guidelines to assist in the development of program, project, site and
- 2 task specific QC policies and procedures;
- 3 • Ensure corrective actions are documented and acknowledged by the Project
- 4 Manager (PjM) and field personnel, as well as communicate to the client,
- 5 when adverse situations or defective work result from a project activity;
- 6 • Conduct periodic field audits of the programs, projects and sites and submit a
- 7 report of findings to the PM;
- 8 • Ensure project deliverables are defined prior to initiation of field operations
- 9 and are submitted as required by the WP and project schedule; and
- 10 • Report regularly to the PM on the adequacy, status, and effectiveness of the
- 11 QC program.

12 **10.4.3 Project Manager**

13 The PjM is responsible for ensuring the availability of the resources needed to  
 14 implement the project QCP and will ensure the QC processes are incorporated in the  
 15 project plans, procedures and training for the specific project. The PjM is  
 16 responsible for the quality and timeliness of all project activities, including those  
 17 performed by subcontractors and suppliers. The PjM's primary responsibilities are:

- 18 • Review and approval of sampling, testing, and field investigation methods
- 19 and QCP, including designs, schedules and labor allocations;
- 20 • Preparation of progress reports with the assistance of key support personnel;
- 21 • Overall project quality management;
- 22 • Coordinating with the SUXOS and UXOSO/SSHO to ensure project quality and
- 23 safety issues are addressed;
- 24 • Developing project plans and associated documentation;
- 25 • Technical review of all project deliverables;
- 26 • Maintaining contact with the client; and
- 27 • Scheduling activities and preparing documents and reports associated with
- 28 the project.

29 **10.4.4 SUXOS**

30 The SUXOS is the senior UXO Technician and on-site supervisor. He controls  
 31 operations of all field teams performing MEC/MPPEH activities and will spend most  
 32 of the day in the field monitoring their performance and helping them achieve

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1 maximum operational safety and efficiency. He reports directly to the PjM. He will  
2 implement the approved plans in the field and must review and approve any  
3 changes. He supervises all UXO teams on a project.

- 4 • Ensuring compliance with contract documents specifications relating to QC;
- 5 • Assessment of the effective implementation of the project QCP;
- 6 • The authority to stop work when significant conditions adversely impact the  
7 quality of work and such action is warranted; and
- 8 • Identify quality problems and ensure that unsatisfactory conditions are  
9 controlled until proper disposition has occurred.

10 ***10.4.5 UXOSO/SSHO***

11 For this site, the SSHO is also a UXOSO. The UXOSO will be responsible for:

- 12 • Implementing the Corporate Environmental Safety and Health Program  
13 (CESHP);
- 14 • Reviewing and monitoring compliance with project-specific health and safety  
15 plans;
- 16 • Implementing corrective measures for health and safety deficiencies; and
- 17 • Conducting required training and medical monitoring of personnel.

18 The UXOSO has the authority to require corrective measures related to health and  
19 safety issues and to stop work, if required, to ensure a safe working environment.

20 ***10.4.6 UXO Quality Control Specialist***

21 The PIKA UXOQCS has the responsibility and authority to enforce the site-specific  
22 QC plans and procedures. This individual reports to directly to the UXO QA/QCM and  
23 coordinates site activities with the SUXOS. The UXOQCS's responsibilities include:

- 24 • Coordinating with RVAAP to ensure that QC objectives appropriate to the  
25 project are set and all personnel are aware of these objectives;
- 26 • Maintain a QC log to document details for field activities during QC  
27 monitoring activities to serve as a memory aid in preparation of the daily QC  
28 Report;
- 29 • Coordinating with the PIKA SUXOS to ensure that QC procedures are being  
30 followed and are appropriate for achieving data validity sufficient to meet QC  
31 objectives;

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- 1 • Conducting periodic QC surveillances of all site activities using the 3 phase
- 2 inspection process and recording the findings in the Daily QC Report for the
- 3 Preparatory, Initial and Follow-on QC Report;
- 4 • Reporting noncompliance with QC criteria to PIKA's SUXOS and PjM. and
- 5 documenting these non-conformances on the PIKA Nonconformance Report;
- 6 • Initiating a Rework Items List on nonconformance areas that must be
- 7 accomplished to meet quality specifications;
- 8 • Conducting QC Meetings as required by RVAAP. Record meeting outcome in
- 9 the Daily QC Report;
- 10 • Coordinating with the responsible parties to initiate the proper corrective
- 11 actions to be taken in the event of a QC deviation and documenting these
- 12 actions on the Corrective Action Request; and
- 13 • Ensuring that Lessons Learned are documented and forwarded to the PIKA
- 14 UXO QA/QCM for analysis.

15 **10.5 CRITICAL ISSUES/ACTIVITIES**

16 PIKA has identified the issues/activities listed below as being critical to the delivery  
17 of a quality product. The following paragraphs describe the QC criteria that PIKA  
18 will apply to these critical issues/activities and the methods PIKA will use to monitor  
19 quality.

20 **10.6 EMPLOYEE QUALIFICATIONS**

21 Prior to an employee's initial assignment or any change in duties/assignment, the  
22 SUXOS will physically review the employee's licenses, training records and  
23 certificates to ensure that the employee is qualified to perform the duties to which  
24 they are being assigned.

25 PIKA will ensure the UXO-qualified personnel meet the standards required by the  
26 client and will be prepared to submit a letter with resumes and UXO database to the  
27 client for approval prior to mobilizing to the site, if the client requests the files prior  
28 to or during the field operations.

29 The UXOSO will maintain personnel files on each employee, to include copies of  
30 licenses, training records and certificates of qualifications that support the  
31 employee's placement and position. At a minimum the files will include:

- 32 • NAVSCOLEOD certification or certification IAW DDESB TP-18 (UXO personnel
- 33 only);
- 34 • Current certificate of medical clearance/annual physical examination;

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- 1 • 40-hour HAZWOPER safety training certification
- 2 • 8-hr HAZWOPER supervisor certification (required by position);
- 3 • Current 8-hr annual HAZWOPER refresher certificate; and
- 4 • Current certificate for CPR training and First Aid

**5 10.7 PUBLICATIONS**

6 PIKA has conducted a technical review of the SOW and all pertinent data, and  
7 compiled a list of required publications to be maintained at the site. In addition to  
8 this list, PIKA will make available, in a timely manner, any additional manuals the  
9 SUXOS may require. Prior to the start of operations and periodically throughout the  
10 project, the SUXOS will check to ensure that site publications are present and in  
11 good repair. Results of this inspection will be recorded and reported. The currently  
12 identified publications include:

- 13 • PIKA Corporate Environmental Safety and Health Program;
- 14 • OSHA, 29 CFR 1910, Occupational Safety and Health Standards;
- 15 • EM 385-1-1, Safety and Health Requirements Manual;
- 16 • EP 385-1-95a, Basic Safety Concepts and Considerations for Ordnance and  
17 Explosives Operations;
- 18 • DOD 4145.26-M, Contractor's Safety Manual for Ammunition and Explosives;
- 19 • DOD 6055.9-STD, DOD Ammunition and Explosives Safety Standards;
- 20 • DA PAM 385-64, Ammunition and Explosives Safety Standards;
- 21 • AR 385-10, The Army Safety Program;
- 22 • AR 385-40 w/supplement, Accident Reporting and Records;
- 23 • ATF P 5400-7; and
- 24 • Material Safety Data Sheets (MSDS) for hazardous substances used on-site.
- 25 • USACE Use of Sandbags for Mitigation of Fragmentation and Blast Effects  
26 Due to intentional Detonation of Munitions. HNC-ED-CS-S-98-7, dated August  
27 1998."

**28 10.8 MONITORING EQUIPMENT CALIBRATION AND TESTING**

29 Measurement equipment utilized on-site (e.g., sampling pumps, real-time monitors,  
30 etc) will be checked for operational reliability and calibration IAW the manufacturer's  
31 specifications.

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1     **10.8.1 Maintenance Program**

2     All tools, instruments, and equipment used on-site will be properly maintained and  
3     calibrated (as necessary) IAW the manufacturer's specifications or standard industry  
4     practices. This applies to communications equipment, vehicles/machinery,  
5     environmental monitoring equipment, and personal protective equipment (PPE).

6     Equipment will be protected from dust and contamination and visually checked for  
7     damage prior to use. Preventative maintenance will be performed on a regular  
8     basis. Critical spare parts will be kept on site to minimize downtime.

9     PIKA has an aggressive maintenance program implemented as discussed below.

- 10     • **Preventive Maintenance:** The assigned operator of each piece of  
11     equipment will perform scheduled, and when necessary, unscheduled,  
12     preventative maintenance to ensure the equipment is maintained in a  
13     satisfactory operating condition. Preventive maintenance consists of before,  
14     during and after operational checks and documentation of these activities,  
15     either in the operators log book or in the team leader's field log book.
- 16     • **Routine Repair and Adjustment:** Routine repair and adjustment is based  
17     on the manufacturer's schedule for adjustment, calibration or replacement.  
18     All equipment used on site will be maintained and submitted for routine  
19     repair and adjustment IAW the manufacturer's specifications.
- 20     • **Emergency Repair:** Emergency repair includes any unscheduled repair.  
21     This type of repair will be conducted using manufacturer required  
22     replacement parts and procedures to ensure the continued integrity of the  
23     equipment.
- 24     • **Radios/Cellular Phones:** Before-operation checks shall include verification  
25     of a complete battery charge and a communications check to ensure the unit  
26     is operating properly. During-operation checks shall include periodic checks  
27     to ensure battery charge remains adequate and a communications check  
28     once an hour for the radios and once a day for the cellular phone. After-  
29     operation maintenance shall include a communications check, cleaning,  
30     turning off and placing in battery charger.
- 31     • **Vehicles:** Before-operation checks shall include an operator general  
32     inspection of the entire unit to include fluid levels, safety equipment  
33     operation and tire condition. During-operation checks shall include frequent  
34     inspections of the dials and gauges and a tire inspection at breaks. After-  
35     operation checks shall include topping off of any fluids, which are low, a  
36     general cleaning and a recheck of all safety related equipment.

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1     **10.8.2 Logs and Records**

2     For all site work, bound log books with consecutively numbered pages will be used  
3     by field personnel. The field log books will be used to record the daily activities of  
4     the field team, provide sketch maps and other pertinent items, and to note any  
5     observations which might affect the quality of data. The field log books and site  
6     records will be utilized to record the data discussed below:

- 7         • **Daily Journal:** The SUXOS will maintain the daily journal. This journal will  
8         provide a summary of all operations conducted to include information on  
9         weather conditions, problem areas, WP modifications, injuries, start/stop  
10        times, tailgate safety briefs, equipment discrepancies, training conducted,  
11        visitors, and any additional items deemed appropriate.
- 12       • **Safety Log Book:** The UXOSO will maintain this safety log book. The log  
13       will be used to record all safety related matters associated with the specific  
14       project such as: safety briefings/meetings, including items covered and  
15       attendees; safety audits; near-misses/accidents/incidents. It will include  
16       cause and corrective action taken; weather conditions; and any other matters  
17       encompassing safety.
- 18       • **Training Records:** The UXOSO will maintain training records for all site  
19       personnel. These records will contain training certificates, licenses and other  
20       qualifying data for an individual's duty position.
- 21       • **QC Log Book:** The UXOQCS will maintain this log and will record the  
22       performance and results of QC checks and audits.
- 23       • **Visitors Sign-in Sheet:** The SUXOS will maintain this log for all personnel  
24       that are not directly involved in the project site activities. This log will  
25       identify visitors by name, company, date, time in/out and a contact phone  
26       number.
- 27       • **Photographic Record:** The SUXOS will maintain a photographic record to  
28       record all video recording and photographs taken to document work and/or  
29       site conditions. Photographs and video tapes will be marked with a unique  
30       identifying number relating back to the photographic log, and will be  
31       maintained on file until the end of the project. Photographic negatives and  
32       duplicate copies of video tapes will be forwarded to the PIKA corporate office  
33       for safekeeping.
- 34       • **Site Maps:** The SUXOS will maintain working maps of the operating areas.  
35       These maps will be used to document task progression and other pertinent  
36       activities and locations.

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1 Log books and records will be inspected by the UXOQCS on a weekly basis. These  
2 inspections will focus on the completeness, accuracy, and legibility of the entries  
3 and records. Results of these inspections will be forwarded to the SUXOS. The log  
4 keeper's immediate supervisor will review and initial in the log book concurrence  
5 with the log book entries on a daily basis.

6 The log books are utilized to formulate the final report and serve as an "Official  
7 Document" in the event of any problem area addressed after the completion of the  
8 project. All log books will be maintained on file for a period of seven years after  
9 project completion. These logs may be digital and saved on disk.

10 ***10.8.3 QA/QC Audits and Surveillance***

11 An audit is an examination and evaluation performed to determine whether  
12 applicable elements of the site-specific QCP and WP have been performed,  
13 documented, and effectively implemented IAW specified requirements.

14 As part of the QAP, PIKA will conduct both internal and external audits and  
15 surveillance at RVAAP. This is to ensure that all procedures and protocols are being  
16 followed and that the resulting data is accurate and defensible. Field audits will  
17 concentrate on MEC procedures, proper documentation, and checks of resulting  
18 data for completeness and accuracy within established QC limits.

19 ***10.8.4 QC Inspections***

20 PIKA will perform inspection and surveillance of all work areas to maintain control  
21 over field activities identified in the WP.

22 To ensure that quality work is conducted, QC inspections will be conducted  
23 according to the criteria specified in the following paragraphs. All inspections will be  
24 conducted by the responsible personnel and documented accordingly.

25 ***10.8.5 Phase Inspection Process***

26 The UXOQCS will ensure that the 3-phase control process is implemented for each  
27 definable feature of work, regardless of whether they are performed by PIKA or its  
28 subcontractors. Each control phase is important for obtaining a quality product.  
29 However, the preparatory and initial inspections will be particularly invaluable in  
30 preventing problems. Production work will not be performed on a definable feature  
31 of work until a successful preparatory and initial phase inspection has been  
32 completed.



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1     ***10.8.6 Preparatory Phase Inspection***

2     A preparatory phase inspection will be performed prior to beginning each task. The  
3     purpose of this inspection will be to review applicable specifications and verify the  
4     necessary resources, conditions, and controls are in place and compliant before the  
5     start of work activities.

6     The UXOQCS will verify with the client that all prerequisite submittals have been  
7     submitted and approved, and that lessons learned during previous similar work have  
8     been incorporated as appropriate into the project procedures to prevent recurrence  
9     of past problems. The UXOQCS will meet with the PjM and the staff responsible for  
10    the performance of a given task, including subcontractor personnel. He/she will  
11    generate and use a Preparatory Phase Inspection Checklist.

12    WP and operating procedures will be reviewed by the UXOQCS to ensure they  
13    describe pre-qualifying requirements or conditions, equipment and materials,  
14    appropriate sequence, methodology, and QC provisions. The UXOQCS will verify the  
15    following:

- 16       • Required plans and procedures have been prepared and approved and are  
17       available to the field staff;
- 18       • Field equipment is appropriate for its intended use, available, functional, and  
19       properly calibrated;
- 20       • Responsibilities have been assigned and communicated; the field staff have  
21       the necessary knowledge, expertise, and information to perform their jobs;
- 22       • The arrangements for support services have been made; and
- 23       • The prerequisite site work has been completed.

24    Discrepancies between existing conditions and approved plans/procedures will be  
25    resolved and corrective actions taken for unsatisfactory and nonconforming  
26    conditions identified during a preparatory phase inspection. This will be verified by  
27    the SUXOS or his designee prior to granting approval for work to begin.

28    The UXOSO will discuss job hazards with site personnel and verify that the  
29    necessary safety measures are in place and ready for use.

30    ***10.8.7 Initial Phase Inspection***

31    An initial phase inspection will be performed the first time a task is performed. The  
32    purpose of the inspection will be to:

- 33       • Check the preliminary work for compliance with procedures and contract  
34       specifications;

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- 1 • Verify inspection and testing and establish the acceptable level of
- 2 workmanship;
- 3 • Check safety compliance, review the minutes of the Preparatory Phase
- 4 Inspection; and
- 5 • Check for omissions and resolve differences of interpretation.

6 The UXOQCS will be responsible for ensuring that all discrepancies between site  
7 practices and approved specifications are identified and resolved.

8 Discrepancies between site practices and the approved plans/procedures will be  
9 resolved. Corrective actions for unsatisfactory conditions or practices will be verified  
10 by the SUXOS or his designee, prior to granting approval to proceed.

11 The results of the initial phase inspection will be documented in the QC log book, on  
12 the Initial Inspection Checklist and summarized in the Daily QC Report.

13 ***10.8.8 Follow-up Phase Inspection***

14 A follow up phase inspection is performed each day a task is performed. The  
15 purpose of the inspection is to ensure a level of continuous compliance and  
16 workmanship. The UXOQCS is responsible for onsite monitoring of the practices  
17 and operations taking place and verifying continued compliance with the  
18 specifications and requirements of the contract and approved project plans and  
19 procedures. If a work stoppage is required to correct some procedure a Stop Work  
20 Order will be completed.

21 The UXOQCS is also responsible for verifying that a daily health and safety  
22 inspection is performed and documented as prescribed in the SSHP. The SUXOS will  
23 oversee and observe the same activities as under the initial inspection.  
24 Discrepancies between site practices and the approved plans/procedures shall be  
25 resolved and corrective actions for unsatisfactory and nonconforming conditions or  
26 practices verified by the SUXOS or his designee, prior to granting approval to  
27 continue work. Follow-up phase inspection results will be documented in the QC log  
28 book on the Follow-up Inspection Checklist and summarized in the Daily QC Report.

29 Additional inspections performed on the same task may be required at the discretion  
30 of RVAAP FM or the SUXOS with the approval of the Client. Additional preparatory  
31 and initial inspections are generally warranted under any of the following conditions:

- 32 • Unsatisfactory work, as determined by PIKA or the client;
- 33 • Changes in key personnel;

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- 1       • Resumption of work after a substantial period of inactivity (e.g., 2 weeks or  
2       more); and  
3       • Changes to the project SOW/specifications.

4       **10.8.9 Lessons Learned**

5       During the course of field activities, data or information may be discovered that  
6       could eliminate or reduce challenges and/or offer opportunities for quality and  
7       productivity improvements through value engineering. These lessons learned will  
8       be valuable tools in updating plans and procedures for follow-on field operations.

9       Lessons learned will be captured, documented, and submitted to the client during  
10      the entire project. In the event of accidents the UXOSO will perform this function.  
11      If the lesson learned will affect the job by making it better, cheaper or faster, then  
12      the UXOQCS will gather this information, and include with the weekly status report.

13      Topics for consideration for determining lessons learned include:

- 14      • Problems encountered,  
15      • Solutions developed to solve the problems,  
16      • Alternative procedures or processes that improve the field operations, and  
17      • Quality/Productivity Improvements.

18      **10.8.10 Project Correspondence**

19      All written and verbal (i.e., person-to-person or via telephone) correspondence will  
20      be documented and routed to the PIKA PjM. Incoming written communications will  
21      be annotated with the date received.

22      Telephone communications to office personnel must be recorded on a Telephone  
23      Conversation/Correspondence Record form. Of critical importance is the  
24      documentation of activities that stop work or require a communication to or from  
25      RVAAP.

26      **10.9 PROJECT RECORDS**

27      Project records will be maintained in project files for the contract duration.

28      **10.10 CONTRACT CORRESPONDENCE**

29      Correspondence concerning this contract is to be sent to:

30                      PIKA, International, Inc  
31                      12723 Capricorn Drive, Suite 500

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1    Stafford, TX 77477

2      The PIKA PjM is Mr. Brian Stockwell. Mr. Stockwell can be contacted as follows:

3      *Address:*                          PIKA International, Inc.  
4    8451 State Route 5  
5    Building 1038  
6    Ravenna, OH 44266

7      *Telephone:*                      Office: 330/358-7135  
8    Mobile: 330/352-6955  
9    Facsimile: 330/358-2924

10     *Electronic Mail:*                [bstockwell@pikainc.com](mailto:bstockwell@pikainc.com)

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1 **11.0 ENVIRONMENTAL PROTECTION PLAN**

2 **11.1 INTRODUCTION**

3 The environmental resources within the project boundaries and those affected  
4 outside the limits of permanent work under this contract will be protected during the  
5 entire period of this contract. PIKA will confine its activities to areas defined by this  
6 WP. Environmental protection will be as stated in the following subsections.

7 PIKA is directly responsible for the implementation of this plan. Inspections will be  
8 made to assure field personnel's compliance with this plan. Following are several  
9 specific areas of concern that fall under environmental protection.

10 **11.2 IDENTIFICATION OF AREAS REQUIRING PROTECTION**

11 ***11.2.1 Endangered/Threatened Species***

12 PIKA will perform all site activities in such a manner as to avoid or minimize adverse  
13 effects to any endangered or protected plant/wildlife species and resources  
14 discovered on the site. If endangered or threatened species are encountered during  
15 site activities, PIKA will locate and flag-off the areas and immediately notify and  
16 obtain guidance from RVAAP before continuing operations within the flagged area.  
17 All PIKA site personnel will adhere to the specific guidance received from RVAAP.  
18 There are no known federally listed endangered, threatened, or candidate species  
19 within the project area.

20 ***11.2.2 Wetlands***

21 Wetlands are not identified within the areas under this SOW. If wetlands are  
22 encountered, activities within wetlands will be limited. No disturbance or excavation  
23 will occur within an identified state or Federal jurisdictional wetland. If such  
24 disturbances are required, RTLS and BRACO will be consulted and appropriate  
25 actions and measures will be taken.

26 ***11.2.3 Cultural and Archaeological Resources***

27 Currently there are no known archaeological or cultural resources within the areas  
28 under this SOW. If during MPPEH inspection and categorization activities PIKA  
29 observes unusual items that might have historical, archaeological, or cultural value,  
30 such items shall be protected in place and reported immediately to RVAAP FM and  
31 RTLS-Environmental.

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1 **11.2.4 Water Resources**

2 PIKA will keep activities under surveillance, management and control to avoid  
3 pollution of surface and ground waters. Special management techniques as set out  
4 below will be implemented to control water pollution by site operations.

5 **11.3 MITIGATION PROCEDURES**

6 **11.3.1 Waste Disposal**

7 Disposal of any materials, waste, effluents, trash, garbage, unsatisfactorily  
8 decontaminated materials, oil, grease, chemicals etc., in areas adjacent to streams,  
9 rivers or lakes not authorized for waste disposal will not be permitted. If any waste  
10 materials are dumped into unauthorized areas, PIKA will remove the materials and  
11 restore the area to the condition of the adjacent undisturbed area. If necessary,  
12 ground which has been contaminated through the fault or negligence of PIKA will be  
13 excavated, disposed of as directed by RVAAP and Ohio EPA, and replaced with  
14 suitable fill material, compacted and graded, all at PIKA's expense. Disposal of  
15 waste, trash and other materials off the project site will be IAW all applicable  
16 Federal, State and DoD/Army environmental regulations.

17 **11.3.1.1 Solid Waste Disposal**

18 Solid wastes will be placed in appropriate containers, which will be emptied  
19 regularly. All handling and disposal will be conducted to prevent further  
20 contamination and/or contaminant migration. PIKA will dispose of all solid waste  
21 IAW all applicable Federal, State and DoD/Army environmental regulations.

22 **11.3.1.2 Hazardous Waste Disposal**

23 Hazardous waste will be removed from the project site and will be manifested,  
24 transported and disposed of IAW all applicable Federal, State and DoD/Army  
25 environmental regulations.

26 **11.3.1.3 Dust and Emission Control**

27 PIKA will maintain all operational areas, waste areas and other work areas free from  
28 excess dust in quantities constituting a hazard or nuisance. For most excavations  
29 and site operations performed by PIKA, no dust control measures other than wetting  
30 will be needed. Should unanticipated dust control issues arise, PIKA will recommend  
31 temporary methods to control dust (e.g., treatment with chemical suppressants) to  
32 RVAAP FM for approval. PIKA will control dust as the work proceeds and whenever a  
33 dust nuisance or hazard occurs.

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1 Hydrocarbon, carbon monoxide, oxides of nitrogen, and sulfur emissions are the  
2 emissions associated with heavy equipment. If this type of equipment is needed at  
3 this site, the emissions will be controlled through proper vehicle maintenance, use of  
4 mufflers etc., IAW all applicable Federal, State and DoD/Army environmental  
5 regulations.

6 **11.4 SPILL CONTROL AND PREVENTION**

7 Special measure will be taken to prevent chemicals, fuels, oils, greases, bituminous  
8 materials, sawdust, waste washings, herbicides, insecticides, rubbish or sewage and  
9 other pollutants from entering public waters.

10 With the exception of the heavy equipment (if needed) on-site, there is very little  
11 potential for spillage of large quantities of chemicals. PIKA will take all necessary  
12 precautions to prevent spills and will implement contingency measures for cleanup  
13 should any occur. To minimize the potential for and impact of spillage, PIKA will:

- 14 • Submit spill response procedures as part of the SSHP for review and  
15 approval;
- 16 • Use and store minimal quantities of fuels and oils on-site;
- 17 • Apply work practice controls to prevent spills during refueling and  
18 maintenance of power tools, site vehicles and equipment;
- 19 • Maintain on-site spill response supplies and equipment necessary to contain  
20 spilled materials and to remove and contain materials that become  
21 contaminated due to spillage.

22 PIKA will perform, at a minimum, the following emergency procedures if a spill  
23 occurs:

- 24 • Immediately (within 1 hour), notify RVAAP FM and OHARNG;
- 25 • Halt site operations in the area and take immediate measures, using PPE and  
26 personnel to control and contain the spill;
- 27 • Isolate the hazardous area through flagging, removing or extinguishing  
28 ignition sources and evacuation of all unnecessary personnel from the area;
- 29 • If mandated by the nature of the spill, evacuate personnel upwind to the pre-  
30 designated assembly area, and post personnel at access routes to prevent  
31 unauthorized personnel from entering the area; and
- 32 • Implement control measures, if needed, to reduce vapors, gases and/or dust  
33 emissions.

**Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP- 35 Building 1037 – Laundry Waste Water Sump and Laundry Flame Proofing Building; Evaluation and Recommendations for Closure of Clean-Hard Fill Sites**

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- 1       • Conduct all spill response operations in accordance with the RVAAP  
2       installation Spill Contingency Plan and RTLS Integrated Contingency Plan.

3       **11.5 STORAGE AREAS AND TEMPORARY FACILITIES**

4       PIKA will not be locating any new storage areas or temporary facilities with this  
5       project.

6       **11.6 ACCESS ROUTES**

7       During all site activities PIKA will, to the greatest extent possible, use existing paved  
8       and unpaved roadways to minimize the impact of site operations. PIKA does not  
9       expect to deter off paved and unpaved roadways with this project.

10      **11.7 PROTECTION AND RESTORATION OF TREES AND SHRUBS**

11      Trees, shrubs, vines, grasses, landforms and other landscape features to be  
12      preserved will be clearly identified. Except in work areas, trees or shrubs will not be  
13      removed, cut, defaced, injured, or destroyed without the permission of RTLS. Any  
14      areas accessed for the purpose of transporting or transferring materials will be  
15      protected based on the scope of this project and proposed work activities, no trees,  
16      shrubs, vines, grasses, landforms, or other landscape features will be removed,  
17      injured or destroyed. If work activities change and removal or destruction will be  
18      needed, PIKA will consult with RVAAP FM, BRACO and the RTLS-EN office. Any  
19      areas accessed or impacted for the purpose of transporting or transferring materials  
20      will protected and returned to their original condition.

21      **11.8 CONTROL OF WATER RUN ON AND RUN OFF**

22      PIKA will take all reasonable precautions to prevent run-on from entering areas of  
23      the site where it may be exposed to contaminated soils, water or waste as a result  
24      of PIKA site activities. If necessary, PIKA will construct, monitor and maintain  
25      temporary dikes or diversion ditches to prevent water from entering the site.

26      PIKA will implement appropriate controls, such as placing and securing plastic  
27      coverings over any roll-off containers or soil stockpiles, to prevent or minimize  
28      rainfall from contact with hazardous or other wastes/materials created by PIKA. Soil  
29      erosion and therefore sediment control, is not expected to present a significant  
30      problem during site operations. However, site personnel will prevent sediment,  
31      which may or may not contain environmentally significant contaminant levels, from  
32      migrating off-site, installing fabric silt fences, diversion dikes and ditches if needed.  
33      All erosion and sediment control measures will be properly maintained throughout  
34      the duration of the project, as needed, to minimize erosion potential.



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1 **11.9 POST CONSTRUCTION CLEANUP**

2 PIKA will remove all signs of disturbed areas such as access roads, work areas,  
3 fencing or any other signs of construction within the work, storage, and access  
4 areas. The area will be restored to near natural conditions. Any damage to roads,  
5 bridges, gates, etc., as determined by RVAAP FM will be restored to pre-contract  
6 conditions.

**Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP- 35 Building 1037 – Laundry Waste Water Sump and Laundry Flame Proofing Building; Evaluation and Recommendations for Closure of Clean-Hard Fill Sites**

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1 **12.0 INVESTIGATIVE DERIVED WASTE (IDW) PLAN**

2 An IDW plan describes procedures for handling IDW on projects (e.g., Recovered  
3 Chemical Warfare Material (RCWM), contaminated media, hazardous waste and  
4 decontamination wastes, etc.) with RCWM and is not presently required under this  
5 task order. If in the future CWM is found or suspected at this site, an IDW plan will  
6 be prepared IAW the Data Item Description (DID).

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- 1 **13.0 INTERIM HOLDING FACILITY SITING PLAN FOR CWM**
- 2 **PROJECTS**
- 3 No Interim Holding Facility Siting Plan is associated with this Project.

**Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP- 35 Building  
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- 1 **14.0 PHYSICAL SECURITY PLAN FOR RCWM PROJECT SITES**
- 2 Not required by this Task Order.

**Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP- 35 Building 1037 – Laundry Waste Water Sump and Laundry Flame Proofing Building; Evaluation and Recommendations for Closure of Clean-Hard Fill Sites**

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1 **15.0 REFERENCES**

- 2 1. Department of Defense (DOD). *Ammunition and Explosives Safety*  
3 *Standards*. 6055.09-STD, 29 February 2008.
- 4 2. Engineering Pamphlet (EP) 385-1-95a. *Basic Safety Concepts and*  
5 *Considerations for Ordnance and Explosives Operations*, dated 29 June 2001  
6 (Including Errata Sheet #'s 1 (22 September 2006), 2 (29 June 2007) and 3  
7 (4 December 2007)).
- 8 3. Occupational Safety and Health Administration (OSHA) General Industry, 29  
9 CFR 1910, and Construction Industry Standards, 29 CFR 1926.
- 10 4. USACE, Engineering Manual (EM) 385-1-1, Safety and Health Requirements  
11 Manual, 3 November 2003.
- 12 5. USACE, Engineering Regulation (ER) 385-1-95, Safety and Health  
13 Requirements for Munitions and Explosives of Concern (MEC) Operations, 30  
14 March 2007 (Including Errata Sheet #1, 4 December 2007).
- 15 6. DDESB Technical Paper (TP) 15, *Approved Protective Construction (Version*  
16 *2)*, June 2004.
- 17 7. DDESB Technical Paper (TP) 16, *Methodologies for Calculating Primary*  
18 *Fragment Characteristics (Revision 2)*, 17 October 2005.
- 19 8. DDESB Technical Paper (TP) 18, *Minimum Qualifications for Unexploded*  
20 *Ordnance (UXO) Technicians and Personnel*, 20 December 2004.
- 21 9. Engineering Manual (EM) 1110-1-4009 – Military Munition Response, 15 June  
22 2007.
- 23 10. DoDI 4140.62. Management and Disposition of Material Potentially Presenting  
24 an Explosive Hazard (MPPEH), 3 December 2004.
- 25 11. Environmental Protection Agency (EPA, Code of Federal Regulations).
- 26 12. Ohio EPA 2004. Director's Final Findings and Orders in the matter of United  
27 States Department of the Army, Ravenna Army Ammunition Plant, Ravenna,  
28 Ohio. June 2004.
- 29 13. Explosive Safety Submission (ESS) for Inspection and Categorization,  
30 Certification, Recycle and Disposal of MPPEH, Ravenna Army Ammunition  
31 Plant, Ravenna, Ohio.

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**APPENDIX A  
SCOPE OF WORK**

Performance Work Statement  
For  
Disposal of Discarded Munitions Debris & Components, Demolition  
of the Laundry Flame Proofing Building  
and Evaluation/Recommendations for Closure of Clean-Hard Fill Sites at the  
Ravenna Army Ammunition Plant (RVAAP)  
July 23, 2008

**1.0 Scope:**

The project consists of the following:

- 1) 5X certification, and offsite disposal or recycling of Munitions Constituents (MC) and Discarded Military Munitions (DMM) that are stored at the Ravenna Army Ammunition Plant (RVAAP),
- 2) Prepare recommendations and cost estimates to close all clean-hard fill sites at the RVAAP and;
- 3) demolish and dispose of the flame-proofing building and settling tank attached to the north side of Building 1037.

**2.0 Applicable Documents:** Work will be performed IAW the following documents:

- 2.1 An RVAAP approved Work Plan (WP), including Site-Specific Safety and Health Plan (SSHP). These documents are to tier under the installation wide WP and SSHP.

**3.0 General Requirements:**

All documents will conform to the requirements of the RVAAP Deliverable Document Formatting Guidelines.

- 3.1 Prepare a draft and final version of the WP and SSHP describing all aspects of the site activities associated with the implementation of this Performance Work Statement (PWS) The SSHP will address the identification, assessment and control of the hazards associated with site operations.

3.1.1 The contractor shall prepare an explosive safety submission (ESS) or modify an existing ESS as appropriate, for this project. The US Army Technical Center for Explosive Safety (USATCES) and the Department of Defense Explosive Safety Board (DDESB) must approve the ESS or any changes to an existing ESS.

3.1.2 The contractor will maintain adequate site control at all times during execution of this project.

3.1.3 The contractor's effort will begin within thirty-(30)-days after the award of the contract. All physical work will be completed within 12 months thereafter. Contract closeout will take place immediately after final acceptance of its work by the HQ Tank-Automotive Command (TACOM) Contracting Officer (CO) and approval of the final report by the OEPA as described in the Director's Final Findings and Orders.

3.1.4 Changes or modifications to this SOW are not permitted without written approval of the CO.

**3.2 Tasks specific to the MD/MC disposal include, but are not limited to:**

3.2.1 The contractor shall prepare an explosive safety submission (ESS) or modify an existing ESS as appropriate, for this project. The US Army Technical Center for Explosive Safety (USATCES) and the Department of Defense Explosive Safety Board (DDESB) must approve the ESS or any changes to an existing ESS.

3.2.2 Perform a one-hundred percent inspection of the materials and categorize them according to the processing required for 5X certification. These classifications will include but are not limited to: 1) no further processing 2) thermal flashing required, and 3) Munitions and Explosives of Concern (MEC) that requires venting and/or explosive desensitization

3.2.3 MEC or other material found to require specialized processing such as explosive desensitizing to achieve 5X is outside the scope of this contract. Material of this nature will be moved to a magazine for secure storage and disposal at a later date. The contractor will also submit a cost estimate and proposal for the disposal of this material to the Contracting Officer.

3.2.4 The contractor shall prepare and deliver a final report in accordance with paragraph 5.3.

**3.3 Tasks specific to investigations and recommendations for the closure of the clean, hard fill sites include but are not limited to:**

3.3.1 The Work Plan must address testing and disposal of any contaminants such as PCB and lead that would incur regulatory compliance and removing any physical hazards such as exposed re-bar. The contractor should also address consolidating materials to central locations, stabilizing the fill sites, capping and seeding the disturbed areas.

3.3.2 The contractor will evaluate the various options and provide justifications for its recommendations to close the sites to provide an aesthetically pleasing topography, as agreed between the contractor and COR to be described in the work plan that can accommodate future land uses.

3.3.3 Prepare a cost estimate of the various closure options.

3.3.4 The contractor shall prepare and deliver a final report in accordance with paragraph 5.3.

**3.4 Tasks specific to investigations and recommendations for the demolition and disposal of the flame-proofing building and adjacent sump attendant to Building 1037 include, but are not limited to:**

3.4.1 Establish and record GPS coordinates of the sump corners to facilitate any future investigations.

3.4.2 Remove and dispose of transite siding and any miscellaneous asbestos materials.

3.4.3 Demolish, certify 5X and dispose of all piping, the building structure, floor and



foundations. This includes drains to the nearby manhole.

3.4.4 Prior to backfill, install 6 -12 inches of clean sand to serve as a boundary layer indicating the level of the concrete floor of the settling tank and effluent drain(s). Backfill with existing soil and re-grade all disturbed areas to allow unimpeded mowing with a residential grade lawn mower.

3.4.5 Install a secure cover over manhole number 1-3 to serve as a safety cover and prevent entrance by unauthorized individuals.

3.4.6 The contractor shall prepare and deliver a final report in accordance with paragraph 5.3.

#### **4.0 Exclusions**

Sampling for environmental compliance, other than disposal of materials listed above, will be performed under a separate contract.

#### **5.0 Reports**

5.1 All reports, other than progress reports and manpower reports, will be prepared in both draft and final form for review.

5.2 The contractor will prepare weekly and monthly reports documenting the project activities and submit to: the Contracting Officer, the Contracting Officer's Representative (COR), the BRAC Branch Chief, and the Ravenna Facility Manager. The contractor will provide detailed photographic documentation of all site activities within these reports and a separate CD summary of the photos with the final report.

5.3 The contractor will prepare a draft and final project completion report detailing and documenting all activities and shipments.

5.4 The contractor will supply a schedule for inclusion in the RVAAP master schedule. The contractor will participate in the bi-weekly schedule update meeting with the USACE and the weekly contractor meeting held at RVAAP building 1037.

#### **5.5 Contractor Manpower Report**

The Office of the Assistant Secretary of the Army (Manpower & Reserve Affairs) operates and maintains a secure Army data collection site the contractor will report ALL contractor manpower (including subcontractor manpower) required for performance of the contract. The contractor is required to completely fill in all the information in the format using the following web address <https://contractormanpower.army.pentagon.mil>. The required information includes: (1) Contracting Office, Contracting Officer's Technical Representative; (2) Contract number, including task and delivery order number; (3) Beginning and ending dates covered by the reporting period; (4) Contractor name, address, phone number, e-mail address, identity of contractor employee entering data; (5) Estimated direct labor hours (including subcontractors); (6) Estimated direct labor dollars paid this reporting period (including subcontractors); (7) Total Payments (including subcontractors); (8) Predominant Federal Service Code (FSC) reflecting services provided by contractor (and separate predominant FSC for each subcontractor, if different); (9) Estimated data collection cost; (10) Organizational title associated with the Unit

Identification Code (UIC) for the Army Requiring Activity (the Army Requiring Activity is responsible for providing the contractor with its UIC for the purposes of reporting this information); (11) Locations where contractor and subcontractors perform the work (specified by zip code in the United States and nearest city, country, when in an overseas location, using standardized nomenclature provided on website); (12) Presence of deployment or contingency contract language; and (13) Number of contractor and subcontractor employees deployed in theater this reporting period (by country). As part of its submission, the contractor will also provide the estimated total cost (if any) incurred to comply with this reporting requirement. Reporting period will be the period of performance not to exceed 12 months ending September 30 of each government fiscal year and must be reported by 31 October of each calendar year. Contractors may use a direct XML data transfer to the database server or fill in the fields on the website. The XML direct transfer is a format for transferring files from a contractor's systems to the secure web site without the need for separate data entries for each required data element at the web site. The specific formats for the XML direct transfer may be downloaded from the web site.

## **6.0 Inspection / Final Acceptance**

6.1 The COR will monitor contractor performance on this PWS.

6.2 The final acceptance of this project will take place upon receipt by the contractor of written approval from the Contracting Officer.

## **7.0 Safety And Environmental:**

7.1. The contractor is responsible for complying with all federal, state, and local rules, laws and regulations, to include the Occupational Safety and Health Act (OSHA, Title 29 CFR Parts 1926 and 1910), U.S. Environmental Protection Agency (USEPA), Ohio EPA, and Army regulations.

7.2. All hazardous wastes and contaminated material generated by the execution of this project (if any) will be disposed of IAW all applicable federal, state, and local rules, laws and regulations.

7.3 Storage containers will be certified 5x and recycled or disposed of by the most economical means.

\

## **INVENTORY of MD & MC**

Quantity:

47 105mm cartridge cases. (Approximately 25 contain primers)

6 Gaylord boxes (approximately 6 cu-yds) of tracer elements from 152 mm Fleschette rounds.

Gaylord boxes of miscellaneous MEC

1 152mm ammo box containing pieces and parts of various fuzes

55-gal drum with pieces and parts of various fuzes

Empty 175mm projectile

**Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP- 35 Building  
1037 – Laundry Waste Water Sump and Laundry Flame Proofing Building; Evaluation and  
Recommendations for Closure of Clean-Hard Fill Sites**

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**APPENDIX B  
SITE MAPS/FIGURES**

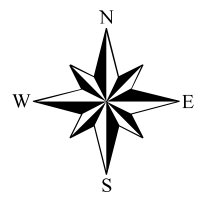
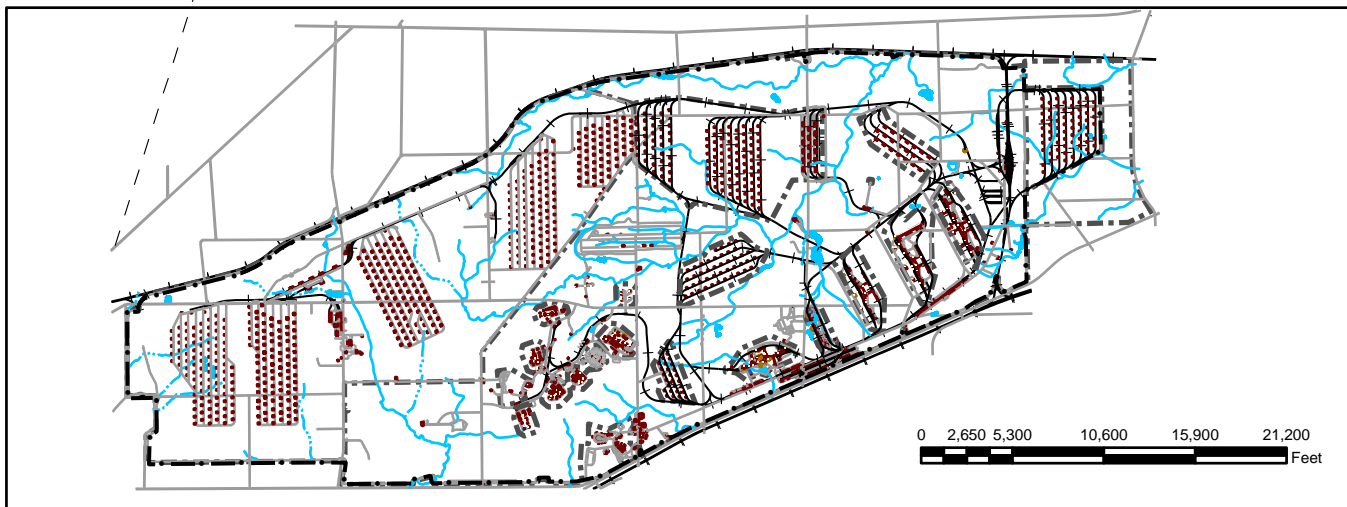
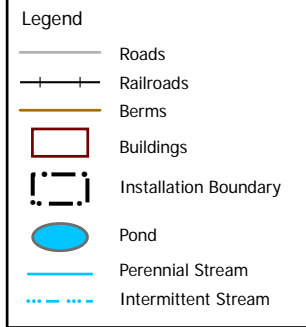
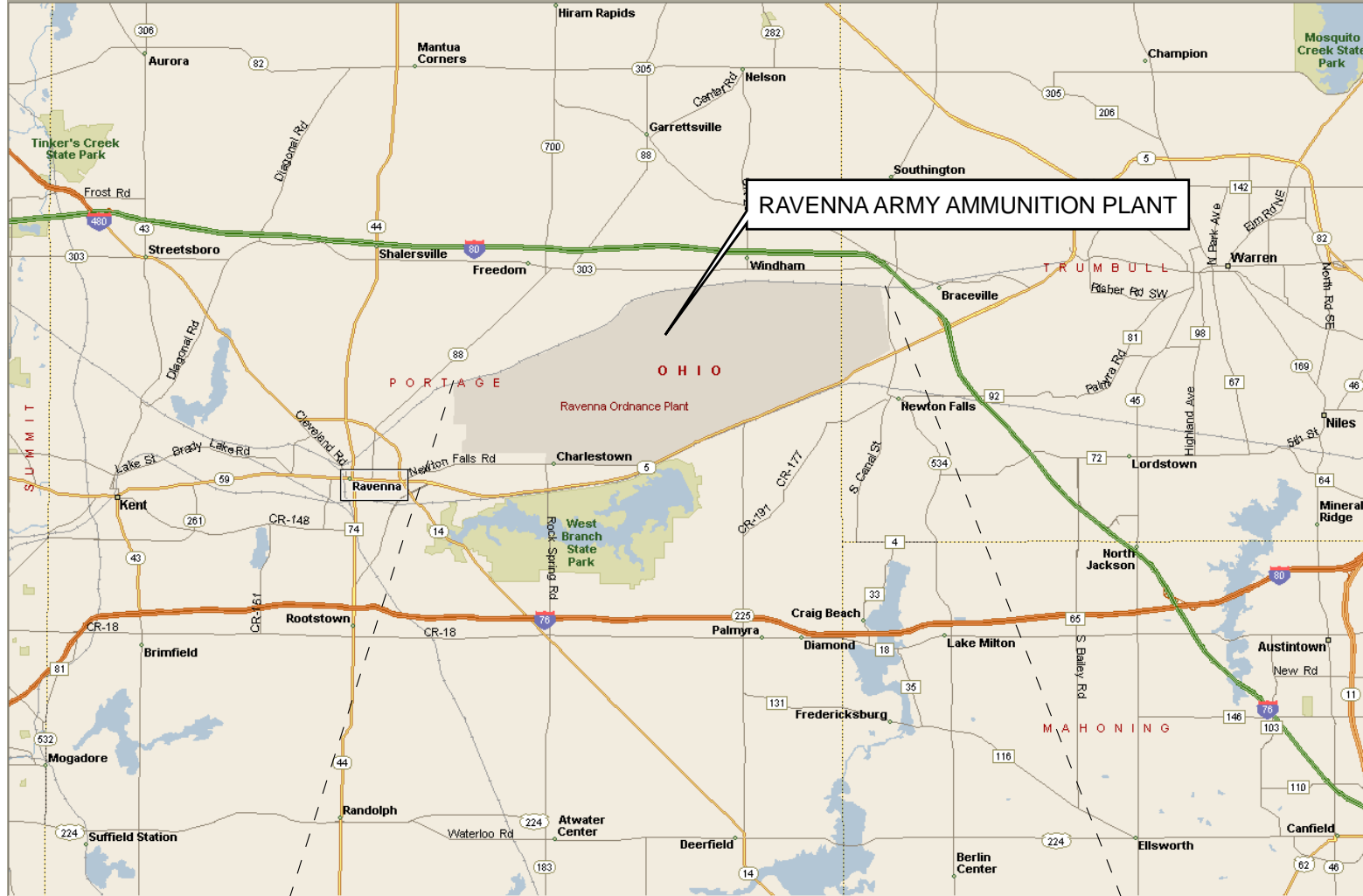
**Figure 1 – Ravenna Army Ammunition Plant Location Map**

**Figure 2 – Location of the Munitions Response Sites**

**Figure 3 – Minimum Separation Distance (MSD) Map**

**Figure 4 – Minimum Separation Distance (MSD) Map for Explosives  
Storage**

**Figure 5 – Project Schedule**

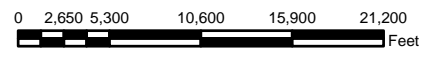


**PIKA** INTERNATIONAL, INC.  
 12723 CAPRICORN DR. STE#500  
 STAFFORD, TX 77477







Ravenna Army Ammunition Plant  
 Ravenna, OH

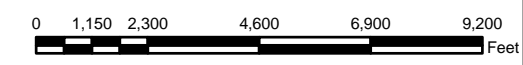
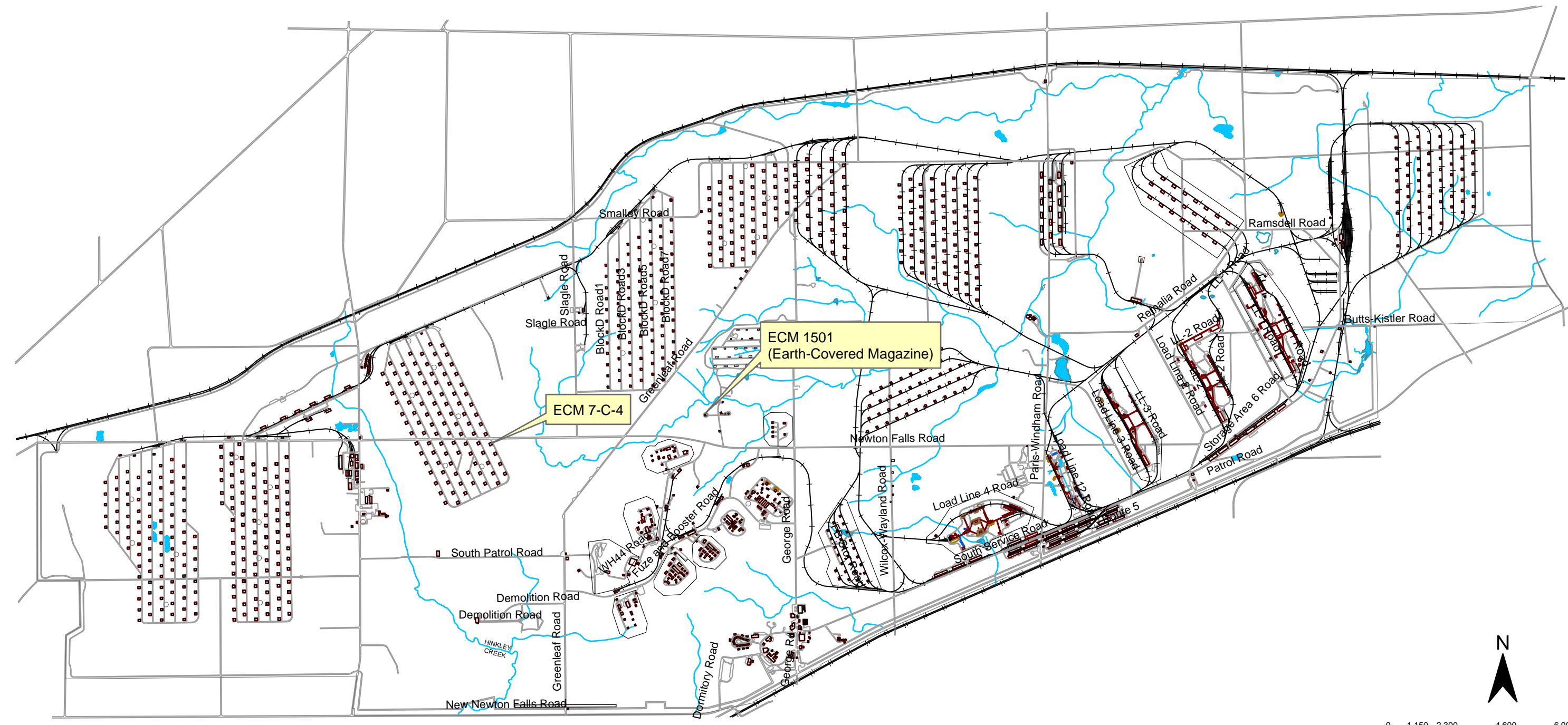
Figure 1  
 Ravenna Army Ammunition Plant Location Map

Drawn On: 10/30/2007 Drawn By: QX Reviewed By: SAK



**Legend**

-  Water Bodies
-  Buildings
-  Walkways
-  Railroads
-  Berms
-  ECM (Earth Covered Magazine)



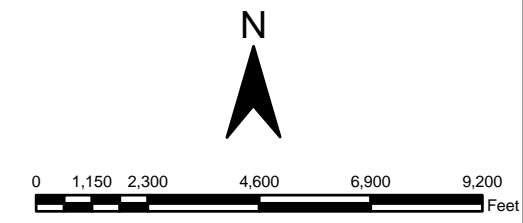
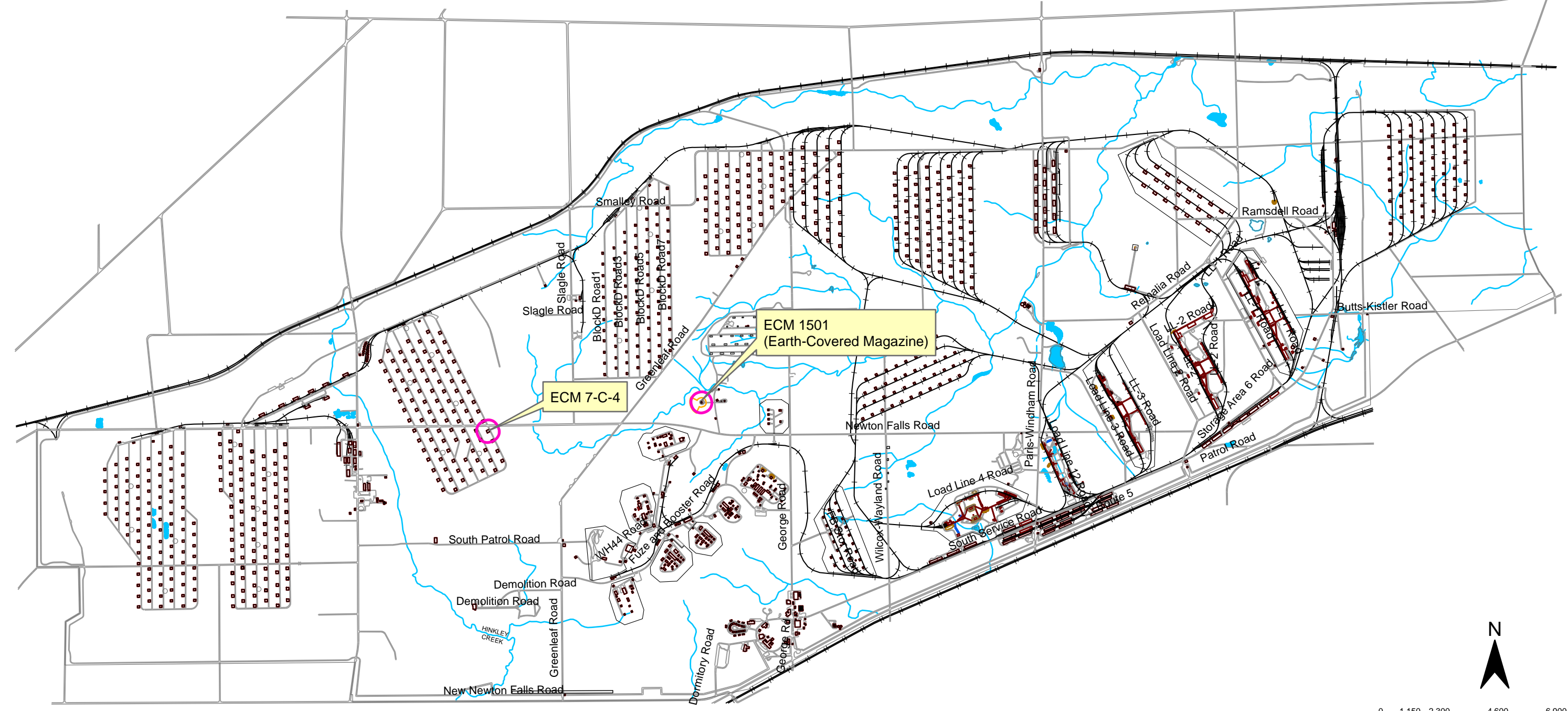
**PIKA** INTERNATIONAL, INC.  
 PIKA International, Inc.  
 12723 Capricorn Dr. Ste#500  
 Stafford, TX 77477  
 Ravenna Army Ammunition Plant  
 Ravenna, OH

**Figure 2**  
**Location of the Munitions Response Sites**

Drawn On: 01/07/2008      Drawn By: QX

**Legend**

- Water Bodies
- Buildings
- Walkways
- Railroads
- Berms
- MSD 378 ft
- ECM (Earth Covered Magazine)



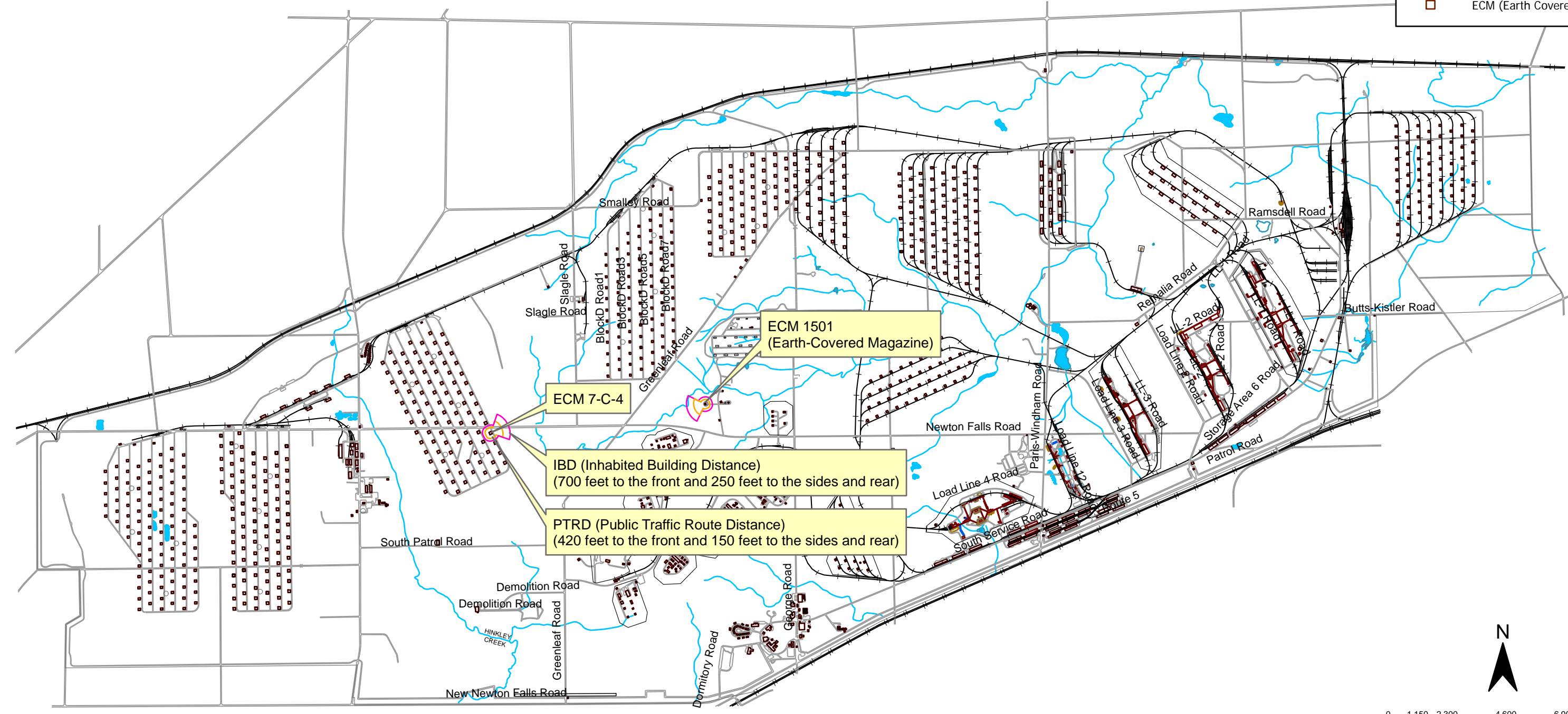
**PIKA** INTERNATIONAL, INC.  
 PIKA International, Inc.  
 12723 Capricorn Dr. Ste#500  
 Stafford, TX 77477  
 Ravenna Army Ammunition Plant  
 Ravenna, OH

**Figure 3**  
**Minimum Separation Distance (MSD) Maps**

Drawn On: 01/07/2008      Drawn By: QX

**Legend**

- Water Bodies
- Buildings
- Walkways
- Railroads
- Berms
- IBD
- PTRD
- ECM (Earth Covered Magazine)

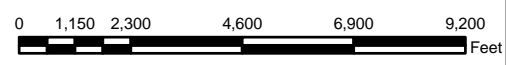


**ECM 1501**  
(Earth-Covered Magazine)

**ECM 7-C-4**

**IBD (Inhabited Building Distance)**  
(700 feet to the front and 250 feet to the sides and rear)

**PTRD (Public Traffic Route Distance)**  
(420 feet to the front and 150 feet to the sides and rear)



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12723 Capricorn Dr. Ste#500  
Stafford, TX 77477

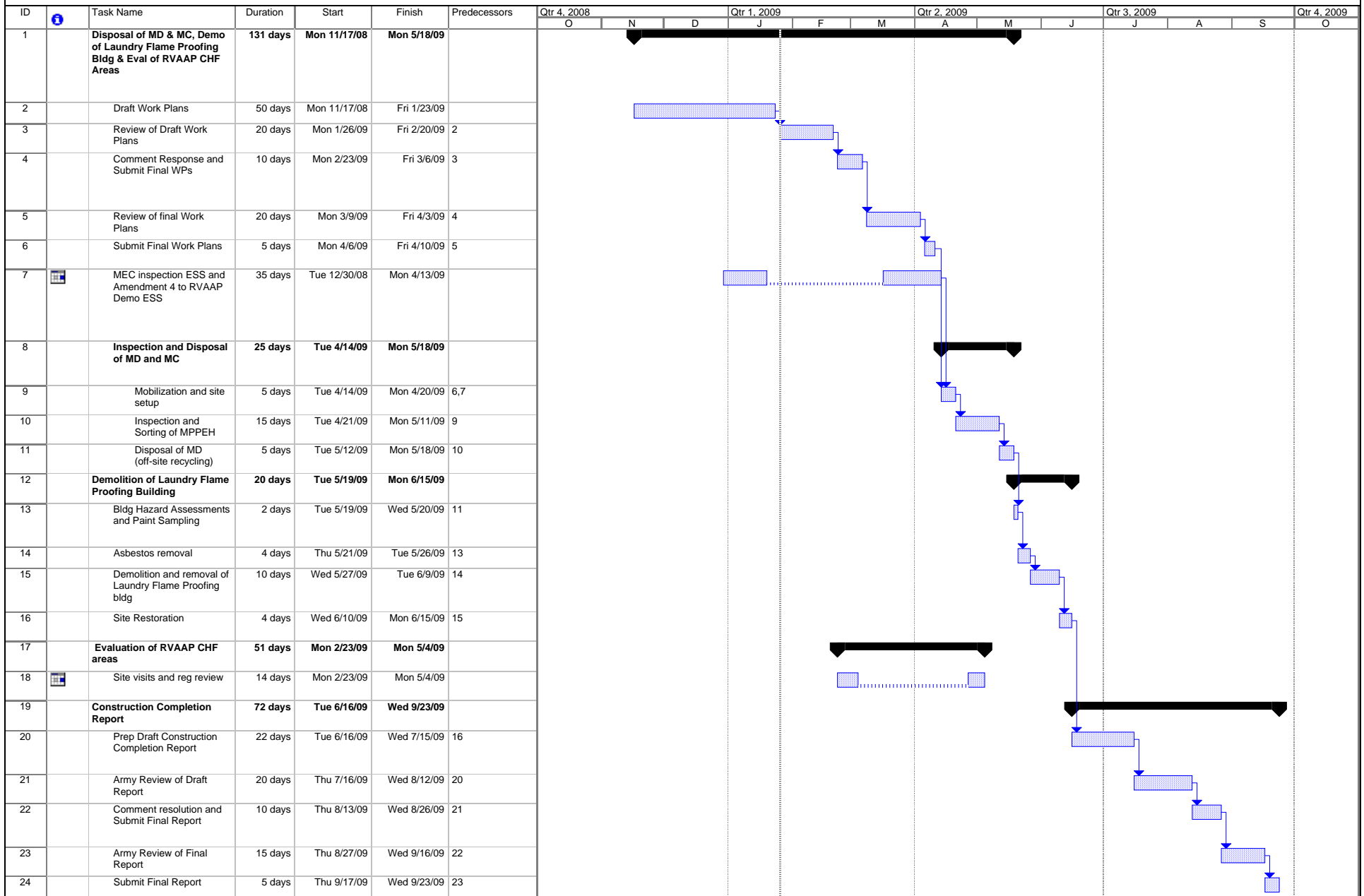
Ravenna Army Ammunition Plant  
Ravenna, OH

**Figure 4**  
**Minimum Separation Distance (MSD) Map**  
**for Explosives Storage**

Drawn On: 01/07/2008      Drawn By: QX



## PRELIMINARY SCHEDULE DISPOSAL OF MD & MC, DEMO OF LAUNDRY FLAME PROOFING BUILDING & EVALUATION OF RVAAP CLEAN HARD FILL SITES



Project: LL1 prelimschedule  
Date: Mon 1/26/09

Task Progress Summary External Tasks Deadline Split Milestone Project Summary External Milestone

**Disposal of Discarded Munitions Debris & Components; Demolition of RVAAP- 35 Building  
1037 – Laundry Waste Water Sump and Laundry Flame Proofing Building; Evaluation and  
Recommendations for Closure of Clean-Hard Fill Sites**

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**APPENDIX C  
POINTS OF CONTACT**

## POINTS OF CONTACT

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