FINAL
Property Management Plan for the Designated Areas of Concerns and Munitions Response Sites Volume One – Version 1.0 Ravenna Army Ammunition Plant Ravenna, Ohio

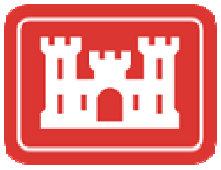
Prepared for:

Ohio Army National Guard
Camp Ravenna Joint Military Training Center
Ravenna, Ohio

Army National Guard Directorate
Arlington, VA

U.S. Army Base Realignment and Closure Division
Ravenna Army Ammunition Plant
Ravenna, Ohio

Prepared by:



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

August 2012

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ACRONYMS & ABBREVIATIONS

AOC	Area of Concern
ARNG	Army National Guard
BGS	Below Ground Surface
BRACD	Base Realignment and Closure Division
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CAMP RAVENNA	Camp Ravenna Joint Military Training Center
C.F.R.	Code of Federal Regulations
CO	Commanding Officer
DERP	Defense Environmental Restoration Program
DFFO	The Director's Final Findings and Orders
DoD	Department of Defense
FWGWMPP	Facility-Wide Ground Water Monitoring Program Plan
FWSAP	Facility-Wide Sampling and Analysis Plan
IAP	Installation Action Plan
IRP	Installation Restoration Program
LUC	Land Use Control
MC	Munitions Constituents
MEC	Munitions and Explosives of Concern
MMRP	Military Munitions Response Program
MRS	Munitions Response Site
NCP	National Contingency Plan
OHARNG	Ohio Army National Guard
OHIO EPA	Ohio Environmental Protection Agency
ORC	Ohio Revised Code

Orders	The Director's Final Findings and Orders
PMP	Property Management Plan
PP	Proposed Plan
RCO	Range Control Officer
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RDX	Cyclonite Hexahydro 1,3,5-Trinitro-1,3,5-Triazine
REIMS	Ravenna Environmental Information Management System
RI/FS	Remedial Investigation/ Feasibility Study
ROD	Record of Decision
RVAAP	Ravenna Army Ammunition Plant
SVOC	Semi-Volatile Organic Compound
TNT	2,4,6-Trinitrotoluene
UCMJ	Uniform Code of Military Justice
U.S.C.	United States Code
WBG	Winklepeck Burning Grounds
WWII	World War II

1.0 INTRODUCTION

1.1 PURPOSE

This Property Management Plan (PMP) identifies Land Use Controls (LUCs) and restrictions for specific Areas of Concern/Munitions Response Sites (AOCs/MRSs) at the Ravenna Army Ammunition Plant (RVAAP), now known and operated as the Camp Ravenna Joint Military Training Center (Camp Ravenna) by the Ohio Army National Guard (OHARNG). The procedures described herein are intended to comply with the *Department of Defense (DoD) Manual, Defense Environmental Restoration Program (DERP) Management, Number 4715.20, March 9, 2012,* (Department of Defense Office of the Under Secretary of Defense for Acquisition, Technology and Logistics) and Ohio Revised Code (ORC) 5913.10.

Land Use Controls include any physical, legal, or administrative mechanism that places restrictions on the use of, or limits access to, real property to prevent exposure to contaminants at concentrations greater than permissible levels or other safety issues. The intent of using these controls is to protect the integrity of the remedy (if present) and human health and the environment by limiting the activities that may occur at an AOC/MRS. Land Use Controls are part of a remedial decision where there may be potential risks or safety issues associated with contaminants not fully eliminated by remedial actions. When implemented, these LUCs provide protection to individuals by limiting and/or preventing activities which could potentially result in risks to people using and working at the AOC/MRS. The Army is responsible to control land use on active installations such as at Camp Ravenna and can internally restrict the use of such property.

This PMP provides mechanisms to implement and manage LUCs at Camp Ravenna. Land Use Controls and other restrictions are often used to support remedial decisions reached through the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) [42 U.S.C. §9601, *et seq*.] risk-based decision process, as implemented through the National Contingency Plan (NCP), 40 C.F.R. Part 300. The LUCs are usually necessary to assure protection of human health and/or the environment is achieved. CERCLA and NCP regulations are followed at RVAAP, and the Ohio Environmental Protection Agency (Ohio EPA) is the lead regulatory agency. The CERCLA NCP process is consistent with the Final Findings and Orders issued by the Director, Ohio EPA, June 10, 2004. These Director's Final Findings and Orders ("Orders") were issued to the United States Department of the Army ("Army" or the "Respondent") pursuant to the authority vested in the Director of Environmental Protection ("Director"), on behalf of the Ohio Environmental Protection Agency ("Ohio EPA"), under Chapters 3734, 3745 and 6111 of the ORC. These Orders are entered into by the Army pursuant to authority vested in the Secretary of the Army by the CERCLA, 42 U.S.C. Section 9601 et seq.; the Defense Environmental Restoration Program (DERP), 10 U.S.C. Section 2701 et seq.; and the NCP, 40 C.F.R. Part 300. The Orders require the Respondent to develop and implement: a Remedial Investigation/Feasibility Study (RI/FS), a Proposed Plan (PP), a Record of Decision (ROD), or other applicable studies/documentation and a remedy for each AOC/MRS or appropriate group of AOCs/MRSs at RVAAP. The Orders also require the Respondent to implement a Facility-Wide Ground Water Investigation, Monitoring and Remediation Program

at RVAAP. All work, plans, and documentation at the RVAAP must be in conformance with CERCLA, the NCP, and the Orders (including the attached Appendices).

The DERP [10 U.S.C. §2701, *et seq*.] is also relevant to the manner in which remediation will proceed, particularly with respect to safety issues unique to munitions and explosives of concern (MEC).

This PMP is required under Army Regulation 210-20, and satisfies requirements of the Orders. Components of the PMP (specifically LUCs) are enforceable under the Orders because the LUCs are part of the remedy and the remedy is a requirement of the Orders. If the Army fails to comply with LUCs or any component of a remedy established to protect human health and the environment at an AOC/MRS as identified through the CERCLA remedial decision process, then the Ohio EPA may take regulatory actions to ensure the failure is corrected.

If residual contamination is left in place after the CERCLA remediation process is complete and the contamination still poses a potential for unacceptable risks or exceeds cleanup standards, then the ROD for the AOC/MRS will require LUCs in accordance with the approved Remedial Design (RD).

Appendix A shall include an individual section for each AOC/MRS with LUCs. The level of detail in this PMP varies between the body of the document (which includes general information applicable to Camp Ravenna) and the AOC/MRS-specific sections in Appendix A. This PMP is a dynamic document and will be continually updated/revised/and amended as needed. As the remedial process for an AOC/MRS progresses to the approved RD stage, a new section will be added to Appendix A for that particular AOC/MRS. Each AOC/MRS-specific section in Appendix A includes, as applicable, strategies for implementation of LUCs, maintenance, monitoring, enforcement, and modification or termination of LUCs. The AOC/MRS-specific information in Appendix A is based upon the Final Record of Decision and the approved RD for that specific AOC/MRS.

Current copies of this PMP will be maintained by the Garrison Commander, the Camp Ravenna Environmental Office and the RVAAP Base Realignment and Closure Division (BRACD) Facility Manager. The PMP shall also be appended to the OHARNG Master Plan.

1.2 BACKGROUND INFORMATION

The RVAAP Installation Restoration Program (IRP) began in 1989. The property boundary was resurveyed by OHARNG over a 2-year period (2002 and 2003) and the total acreage of the property was found to be 21,683 acres. As of June 2010, a total of 20,423 acres of the former 21,683-acre RVAAP has been transferred to the Army National Guard (ARNG) and subsequently licensed to OHARNG for use as a military training site.

The current RVAAP consists of 1,260 acres scattered throughout Camp Ravenna. Camp Ravenna is in northeastern Ohio within Portage and Trumbull counties, approximately 3 miles (4.8 km) east-northeast of the City of Ravenna and approximately 1 mile (1.6 km) northwest of the City of Newton Falls. The RVAAP portions of the property are solely located within Portage County. RVAAP/Camp Ravenna is a parcel of property approximately 11 miles (17.7 km) long and 3.5 miles (5.6 km) wide bounded by State Route 5, the Michael J. Kirwan Reservoir, and the

CSX System Railroad on the south; Garret, McCormick, and Berry roads on the west; the Norfolk Southern Railroad on the north; and State Route 534 on the east (Figures 1 and 2). Camp Ravenna is surrounded by several communities: Windham on the north; Garrettsville 6 miles (9.6 km) to the northwest; Newton Falls 1 mile (1.6 km) to the southeast; Charlestown to the southwest; and Wayland 3 miles (4.8 km) to the south.

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

Industrial operations at the former RVAAP consisted of 12 munitions-assembly facilities referred to as "load lines." Load Lines 1 through 4 were used to melt and load 2,4,6-trinitrotoluene (TNT) and Composition B into large-caliber shells and bombs. The operations on the load lines produced explosive dust, spills, and vapors that collected on the floors and walls of each building. Periodically, the floors and walls were cleaned with water and steam. Following cleaning, the waste water, containing TNT and Composition B, was known as "pink water" for its characteristic color. Scupper systems were used to collect pink water, which was contained in concrete holding tanks, filtered, and pumped into unlined ditches for transport to earthen settling ponds. However, in some instances, "pink water" was swept from doorways, or scupper systems overflowed onto the ground surface. Load Lines 5 through 11 were used to manufacture fuzes, primers, and boosters. Potential contaminants in these load lines include lead compounds, mercury compounds, and explosives. From 1946 to 1949, Load Line 12 was used to produce ammonium nitrate for explosives and fertilizers prior to use as a weapons demilitarization facility.

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

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

1.3 IMPLEMENTATION OF THE PROPERTY MANAGEMENT PLAN – ROLES AND RESPONSIBILITIES

It is the responsibility of the Army to implement, inspect, maintain and enforce LUCs at RVAAP. The BRACD Facility Manager for RVAAP will be responsible for the above activities with respect to the LUCs until the responsibility is transferred in writing to the ARNG and OHARNG. This transfer is expected to coincide with transfer of responsibility for the remaining 1,260 acres to ARNG.

2.0 OBJECTIVES

Per the *Department of Defense (DoD) Manual, Defense Environmental Restoration Program (DERP) Management, Number 4715.20, March 9, 2012,* (Department of Defense Office of the Under Secretary of Defense for Acquisition, Technology and Logistics), LUC implementation and management plans should present general objectives of the LUCs for that particular installation and detailed plans for specific AOCs/MRSs. Each AOC/MRS that requires a LUC on Camp Ravenna has unique site-specific objectives that address what needs to be controlled on that particular AOC/MRS and will be presented in the individual sections in the Appendix A.

The general performance objectives of the LUCs at Camp Ravenna are as follows:

1.) Prevent unsafe exposure to surface soils, subsurface soil, wet sediment, dry sediment, surface water, and groundwater that may result in unacceptable risks or adverse health effects, including MEC risks at identified Munitions Response Sites. In addition, although not a general performance Objective associated with a LUC, all military activities executed within Camp Ravenna must be in compliance with OHARNG and DoD safety regulations. If MEC or other hazards are encountered, the OHARNG has specific protective actions and procedures that will be followed. On Camp Ravenna and all operating installations, the Army is responsible for MEC safety through the Department of Defense Explosives Safety Board (DDESB) requirements and Army Regulations.

2.) Prevent ingestion of groundwater with concentrations above maximum contaminant levels (MCLs), RVAAP (specific) cleanup goals, or risk-based levels (where standards do not exist).

3.) Prevent off-site migration of contaminants to surrounding areas through ground water, surface water, or other impacted media at concentrations greater than MCLs, RVAAP (specific) cleanup goals, or other applicable risk-based levels per CERCLA.

3.0 GENERAL LAND USE CONTROLS

There are various terms used by different Federal Agencies that are related to or define a LUC. Terms such as LUCs, Institutional Controls (ICs), Engineering Controls (ECs) are often used interchangeably. The DoD defines LUCs to include any type of physical, legal, or administrative mechanism that restricts the use of, or limits access to, real property to prevent exposure to contaminants at concentrations greater than permissible levels. The intent of using these controls is to protect human health, the environment, and the integrity of a remedy by limiting the access/activities that may occur at a particular contaminated site. The three types of LUCs (per DoD) are described below.

- Physical Mechanisms include a variety of engineered remedies to contain or reduce contamination, and/or physical barriers intended to limit access to property such as fences, signs, or landfill covers.
- Legal Mechanisms include restrictive covenants, negative easements, equitable servitudes, and deed notices that are meant to ensure the continued effectiveness of land use restrictions imposed as part of a remedial decision.
- Administrative Mechanisms include notices, adopted local land use plans and ordinances, construction permitting or other existing land use management systems that may be used to ensure compliance with use restrictions.

Certain LUCs are used to mitigate risks associated with exposure to contamination, when it is inappropriate or not feasible to eliminate those risks by removing or treating the contaminated media to unrestricted use levels. Generally, LUCs are used as a component of other remedial actions. In many circumstances LUCs are used when the alternative of leaving contaminants in place proves to be the most favorable risk management decision (e.g., due to technical or economic limitations, concerns regarding worker safety, or to prevent collateral ecological damage).

Land Use Controls for Camp Ravenna were established based on results from remedial investigations and remedial actions where some degree of control was determined to be necessary to prevent unsafe exposure (exposure to concentrations expected to result in unacceptable risks or adverse health effects) to the residual contamination. All receptors and the input parameters used to evaluate their potential exposures were considered when determining potential risks and safe levels from exposure to residual contamination at the AOC/MRS. The specific Land Uses, exposure parameters, and the receptors can be found in the Human Health Risk Assessor's Manual (see RVAAP's *Facility Wide Human Health Risk Assessor Manual Amendment 1, USACE, 1 Dec 2005*) and the RVAAP's Facility-wide Cleanup Goal Report (*Final Facility-Wide Human Health Cleanup Goals for Ravenna Army Ammunition Plant, SAIC, 23 Mar 2010*). The purpose of assessing risks to OHARNG- specific receptors was to identify LUCs that were needed that would restrict OHARNG's activities on the AOC/MRS in order to be protective. Land Use Controls essentially define what restrictions/limitations are associated with the use of a particular AOC/MRS. The USACE issued a process Paper entitled "Final Guidance Document for the Evaluation of Land Use Control at the Ravenna Army Ammunition Plant, Ravenna, Ohio, February 2011" (LUC Evaluation document). The process in this LUC Evaluation document allows a systematic approach to assess LUCs and determine if the area affected by the LUC can be reduced therefore increasing the area where training may occur

without the LUC. At the time of finalization of this PMP, the Army has been preparing a White Paper that includes a discussion of Land Uses, Exposure Scenarios, and National Guard Receptors and how these relate to general Land Use Categories such as Residential/Industrial/ or Commercial. This White Paper also includes a supplement to the process in the LUC Evaluation document that optimizes the LUC Evaluation procedure.

Land Use Controls including operation and maintenance requirements, associated specifically with any one RVAAP AOC/MRS are discussed in Appendix A for that particular AOC/MRS. The AOC/MRS-specific narrative in Appendix A will be updated as necessary to support changes to the status of the AOCs/MRSs. Updates are the responsibility of the RVAAP BRACD Facility Manager until the responsibility is transferred in writing to ARNG and OHARNG.

The LUCs for each AOC/MRS will be reviewed as specifically described for each AOC/MRS in Appendix A. Operational and maintenance requirements and any corrective actions will be noted during reviews and recorded during the AOC/MRS-specific inspections. All reviews (e.g., quarterly or as stated in the Appendix A) will be documented in an Annual Report that will supplement the required five-year review process under CERCLA's Long Term Management requirements. It is anticipated that the frequency of the reviews and/or Annual Reports may be modified in the future (subsequent to Ohio EPA approval), but will be determined on an AOC/MRS specific-basis.

4.0 LAND USE CONTROL MECHANISMS AND TRAINING

4.1 ENGINEERING CONTROLS

As previously defined, LUCs include any type of physical, legal, or administrative mechanism that restricts the use of, or limits access to, real property to prevent or reduce risk to human health and the environment. Physical mechanisms encompass a variety of engineered remedies to contain or reduce contamination and/or physical barriers to limit access to property, such as fences or signs. Based upon this definition, inspections completed for each AOC/MRS (using forms similar to that in Appendix B) will document all LUCs associated with each AOC/MRS, including any monitoring, maintenance, and reporting required for continued operation and maintenance.

4.1.1 Facility-wide Engineering Control – Perimeter Fencing

The perimeter fence is the only facility-wide engineering control that would be considered as a LUC for all AOCs/MRSs that require LUCs/restrictions due to residual contamination. Public access to Camp Ravenna is controlled. The installation is surrounded by a chain-link perimeter fence. The perimeter fence will be maintained indefinitely by the Army unless it is determined to not be necessary to have secure fencing to deter unauthorized access to the facility and/or is no longer a required LUC. Such determination shall be coordinated with and approved by the Ohio EPA and all Stakeholders.

4.1.2 AOC-Specific Engineering Controls

The AOC-specific engineering controls will be documented in the appropriate section for each AOC/MRS in Appendix A. Such controls as fences, warning signs, Seibert stakes, or landfill covers may be part of an AOC/MRS-specific LUC. These requirements will be specified in the individual AOC/MRS sections in Appendix A of this PMP. The AOC-specific LUCs associated with each AOC/MRS, will include monitoring, maintenance, and reporting required for continued operation and maintenance.

4.2 LAND USE CONTROL AWARENESS TRAINING

4.2.1 Standard Awareness Training

LUC awareness training will be provided to all appropriate individuals (e.g., personnel, visitors, visiting units) before they are granted access to any area with a LUC. The training will be conducted by the Army or OHARNG. The LUC training will provide an overview of this PMP and the procedures for preventing and reporting LUC violations, as well as any AOC/MRS specific restrictions. An annual refresher course will also be provided. Standard in-processing

of newly assigned permanent party and contract employees shall include the standard LUC awareness training if the individual will be accessing any area with a LUC.

4.2.2 Training Materials

This PMP shall serve as the basis of all LUC awareness training materials. Appendix A includes the AOC/MRS- specific LUC information.

4.2.3 Training Records

Documentation of training sessions will be kept on record for future reference and to supplement inspections and the CERCLA Five-Year Review for each AOC/MRS. Each training record will annotate the date, time, location, instructor(s), name of audience (e.g., X-Company, Unit, Group, platoon, etc.), title of training, and which AOCs/MRSs are likely to be involved for purposes of awareness during field training activities.

5.0 MONITORING AND REPORTING

Site inspections will be conducted by the Army or OHARNG to confirm if the LUCs remain effective and meet LUC objectives for continued remedy protectiveness. Site inspections will be conducted periodically, as directed by the AOC/MRS-specific RD. At a minimum, a LUC AOC/MRS Inspection Form located in Appendix B of this PMP will be completed for each periodic inspection. The scheduling and completion of periodic inspections for multiple AOCs/MRSs may be synchronized (subsequent to Ohio EPA approval) in order to increase efficiency and reduce administrative costs, without reducing the frequency of inspections. Results from periodic inspections will be reported in an annual LUC monitoring report, with changes in inspection frequency to be coordinated with and approved by Ohio EPA.

The annual LUC monitoring report will evaluate the status and effectiveness of LUCs with a description of how any LUC deficiencies, including inconsistent land uses, were addressed. The Annual LUC report will summarize all monitoring completed during the calendar year for all the AOCs/MRSs. This Annual LUC report will be submitted to the Ohio EPA for review and approval. The Annual LUC monitoring reports will be used in the preparation of the CERCLA 121(c) Five-Year Review. The Annual LUC monitoring report will include a written certification stating whether or not the LUCs remain in place and are effective.

Inspections will be conducted according to the frequency cited within the RD and Appendix A for the AOCs/MRSs listed in this PMP. A separate AOC/MRS-specific Inspection Form will be developed for each AOC/MRS in coordination with the Ohio EPA using the Template Form provided in Appendix B. The AOC/MRS-specific Inspection Forms will include specific monitoring and maintenance requirements for that particular AOC/MRS. The AOC/MRS-specific Inspection Forms will be completed by the Army for each LUC inspection on an AOC/MRS and submitted to the Ohio EPA. The completed AOC/MRS-specific Inspection Forms will be used to support the preparation of the Annual Report (summarizing current status of land use classification and LUCs) for each AOC/MRS covered by this PMP.

6.0 ENFORCEMENT OF LAND USE CONTROLS

All Army and OHARNG/Camp Ravenna personnel and authorized visitors to the installation will be required to comply with the prescribed LUCs. If Army personnel observe a LUC violation, they will immediately take appropriate corrective action (e.g., halt excavation operations, apprehend trespasser(s), take appropriate action to safely remove trespassers from unauthorized areas, etc.). Any observed LUC violations will be reported to the Army component in charge (e.g., RVAAP BRACD Facility Manager or OHARNG Commanding Officer - CO) within 48 hours, or as soon as practicable. The RVAAP BRACD Facility Manager, in consultation with the Camp Ravenna CO, or the current lead Army component will take action to restore the integrity of the LUC, and will assess whether any additional preventive measure(s) should be considered as a result of the reported incident (e.g., repair fence, post signs, publish further command guidance, prosecute trespassers, etc.).

Administrative corrective measures should be sufficient to resolve most LUC violations (e.g., verbal or written counseling, administrative sanctions against contractors, etc.). However, in the event of a more egregious trespass or a repeat offender, offenders may be subjected to administrative action or punishment under the Uniform Code of Military Justice (UCMJ) for military personnel; or title 18 U.S.C. 1382 and title 50 U.S.C. 797 for civilians. Additionally, the Ohio Code of Military Justice, Ohio Revised Code (ORC) Chapter 5924 [or other state military code, as appropriate], can be applied if a violation is alleged to have been committed by a Soldier or other uniformed personnel subject to the UCMJ or deemed in violation of military law.

Since civilian personnel are not subject to military law, any sanctions imposed against civilians will be based upon applicable federal and state laws and regulations. Criminal sanctions may be considered for, but not limited to, such acts as unauthorized hunting (OAC Chapters 1531 and 1533; ORC sections 1547.69, 2923.16 and 4519.40), trespassing (ORC 2911.21), and attempted theft of scrap (ORC 2913.01 (K)).

If the Army discovers any land use that is inconsistent with LUC objectives or practices, and/or that impairs the effectiveness of remedial actions at an AOC/MRS, the Army will notify Ohio EPA in writing as soon as practicable, but no later than ten (10) calendar days after discovery, with a written description of the inconsistent land use. Within ten (10) calendar days after such notification, the Army will provide Ohio EPA with information regarding what efforts or measures have been or will be taken to address the inconsistent land use.

The LUCs in this PMP are enforceable by the Ohio EPA pursuant to the applicable RODs and RDs, which were prepared in accordance with the Orders for RVAAP.

7.0 CERCLA 121(C) FIVE-YEAR REVIEWS

As part of the CERCLA Section 121(c) Five-Year remedy review process, the Army shall prepare a report evaluating the continued effectiveness of the remedy, including effectiveness of the LUCs and an assessment of whether there is a need to modify the LUCs. Pursuant to the Review of Submittals Section of the Orders, this Five-Year Review report shall be submitted to the Ohio EPA for review and final approval.

The Army will verify whether the LUCs continue to be properly documented and maintained. Each review of the remedy will evaluate whether conditions have changed due to contaminant attenuation, migration or other factors such as land use. Such changes will be investigated to the extent deemed necessary, depending on the AOC/MRS conditions. If the risk levels have changed since initial LUC implementation, LUC modifications will be considered, which may include a change in monitoring frequency.

8.0 MODIFICATIONS

This PMP shall be binding upon the lead Army Agency, and upon its successors, subject to amendment or termination as set forth herein. Any modifications to this PMP will be provided to all stakeholders for their comment and approval. Any modifications to the PMP must be documented in a manner to demonstrate that all LUCs herein are properly maintained throughout the Installation.

The current lead Army agency will provide notice of modification(s) to the Ohio EPA for review, comment, and approval, prior to implementation of the proposed modification. "Change pages" will be appropriately marked, and will identify the effective date. The most current version of the PMP will be maintained by the Army and available on the Ravenna Environmental Information Management System (REIMS) and/or the current repository.

The modifications to LUCs in this PMP may be amended or terminated by consent of all of the following: the current lead Army agency and the Ohio EPA. Amendment shall mean any changes to the LUCs set forth under the AOC/MRS-specific section in Appendix A. Termination shall mean the elimination of all LUCs set forth herein and all other obligations.

9.0 POINTS OF CONTACT

There are five Points of Contact for RVAAP. These are listed in the following.

Ohio EPA Site Coordinator, RVAAP Division of Environmental Response and Revitalization Ohio EPA, Northeast District Office 2110 East Aurora Road Twinsburg, OH 44087 (330) 963-1200
RVAAP BRACD Facility Manager Bldg 1037, 8451 State Route 5 Ravenna, OH 44266-9297 (330) 358-7312/Fax 7314
United States Property and Fiscal Officer for Ohio 2811 W. Dublin-Granville Road Columbus, OH 43235-2788 (614) 336-7201
Camp Ravenna Garrison Commander Ohio Army National Guard Camp Ravenna Joint Military Training Center 1438 State Route 534 SW Newton Falls, OH 44444 (614) 336-6560
Army National Guard Directorate 111 S George Mason Drive Arlington, VA 22204

10.0 PMP APPROVALS

APPROVED:

Date: SEP 10 2012

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Chief, Operational Army, Medical, Industrial, and Reserve Branch
Base Realignment and Closure Division

Date: 13 Sep 2012

Michael C. Ahn
COL, EN
Chief, Environmental Programs Division
Army National Guard Directorate

Date: 21 Sep 12

Deborah A. Ashenhurst
Major General
The Adjutant General
Ohio National Guard

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

August 29, 2012

RE: RAVENNA ARMY AMMUNITION PLANT
PORTAGE/TRUMBULL COUNTIES
PROPERTY MANAGEMENT PLAN
OHIO EPA ID # 267-000859-029

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

CERTIFIED MAIL
7010 3090 0000 3936-6832

Dear Mr. Patterson:

The Ohio Environmental Protection Agency (Ohio EPA), Northeast District Office (NEDO), Division of Environmental Response and Revitalization (DERR) has received and reviewed the document entitled: "Final, Property Management Plan for the Designated Areas of Concern and Munitions Response Sites, Volume 1 – Version 1.0, Ravenna Army Ammunition Plant, Ravenna, Ohio." This document, dated August 2012 and received electronically on August 29, 2012, was prepared for the U.S. Army Base Realignment and Closure Division, the Ohio Army National Guard, and the Army National Guard Directorate by the U.S. Army Corps of Engineers – Louisville District.

The received document is considered final and is approved by Ohio EPA.

Please send me five (5) signed copies of the final Property Management Plan (PMP). (Original signatures are not required; copies of the completed sign-off page are acceptable.) I will distribute the copies to the appropriate personnel within Ohio EPA.

If you have any questions concerning this correspondence, please do not hesitate to call me at (330) 963-1221.

Sincerely,

FOR

Eileen T. Mohr, Project Manager
Division of Environmental Response and Revitalization

ETM/kss

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Justin Burke, Ohio EPA, CO, DERR
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FIGURES

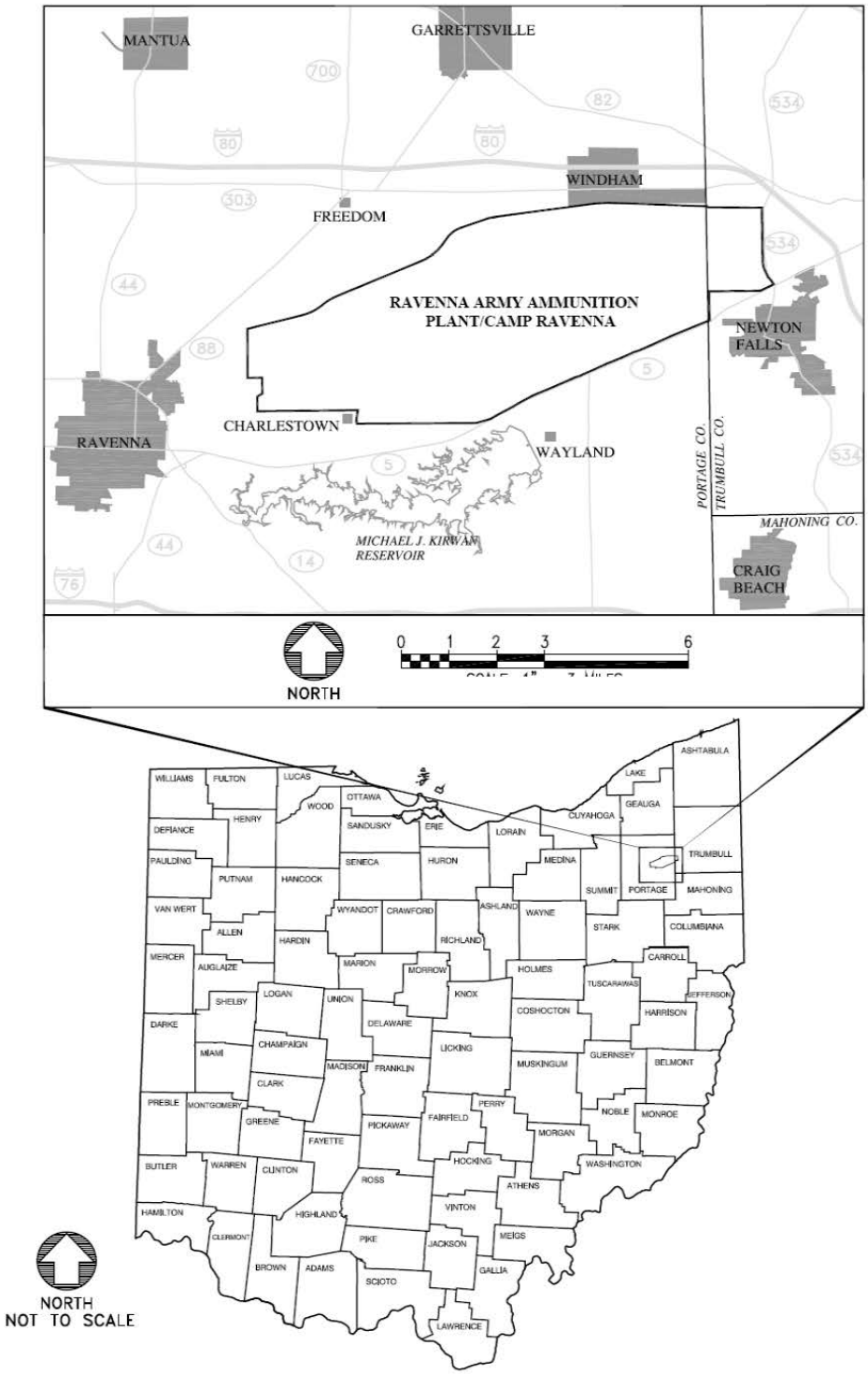
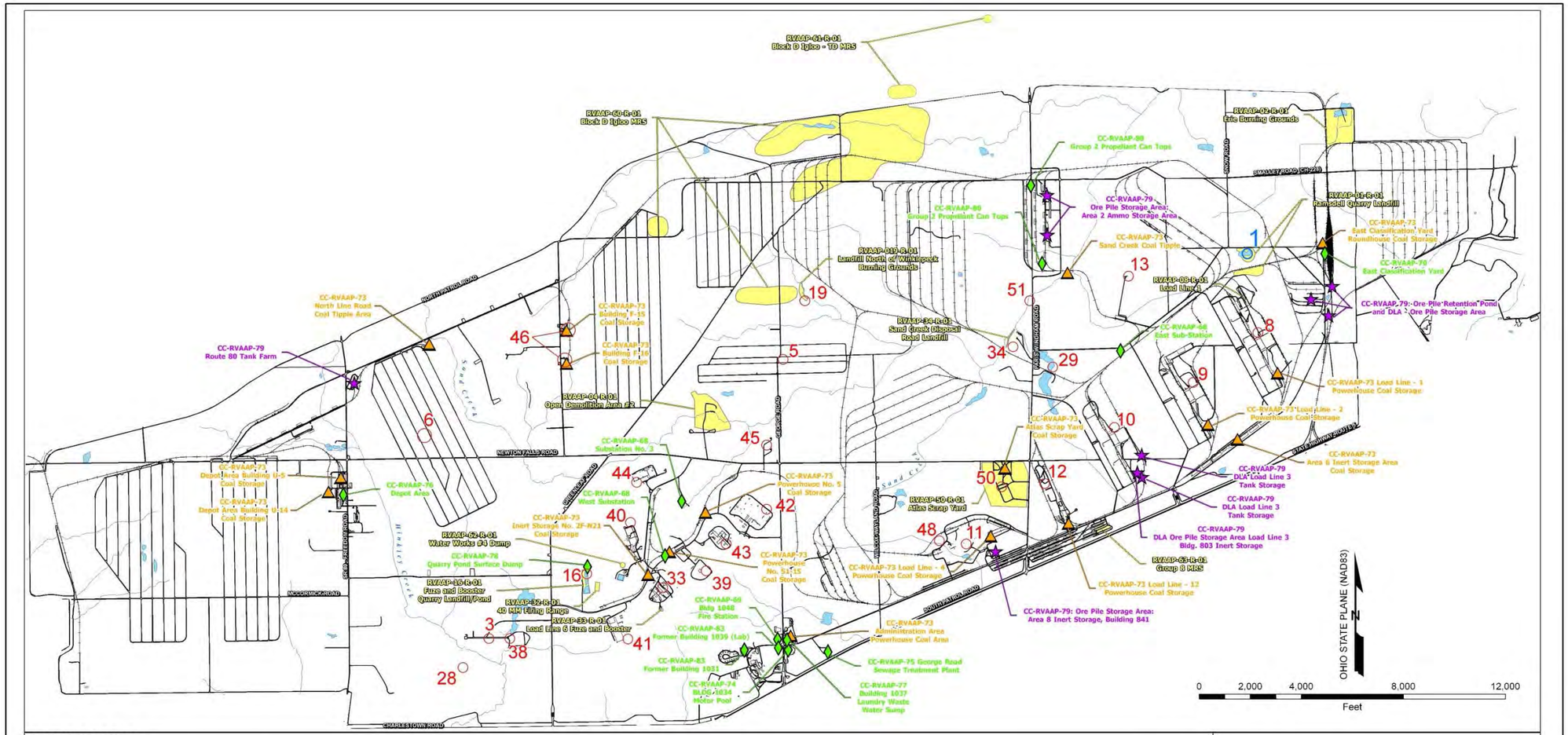


Figure 1. General Location and Orientation of the RVAAP/Camp Ravenna



LEGEND OF SITES

IRP SITES (29 SITES)

- RVAAP-01 ..... RAMSDELL QUARRY LANDFILL
- RVAAP-03 ..... OPEN DEMOLITION AREA 1
- RVAAP-05 ..... WINKLEPECK BURNING GROUNDS
- RVAAP-06 ..... C BLOCK QUARRY
- RVAAP-08 ..... LOAD LINE 1
- RVAAP-09 ..... LOAD LINE 2
- RVAAP-10 ..... LOAD LINE 3
- RVAAP-11 ..... LOAD LINE 4
- RVAAP-12 ..... LOAD LINE 12
- RVAAP-13 ..... BLDG 1200 AND DILLUTION/SETTLING POND
- RVAAP-16 ..... FUZE AND BOOSTER QUARRY LANDFILL/PONDS
- RVAAP-19 ..... LANDFILL NORTH OF WINKLEPECK BURNING GROUND
- RVAAP-28 ..... MUSTARD AGENT BURIAL SITE
- RVAAP-29 ..... UPPER AND LOWER COBBS POND
- RVAAP-33 ..... LOAD LINE 6
- RVAAP-34 ..... SAND CREEK DISPOSAL ROAD LANDFILL
- RVAAP-38 ..... NACA TEST AREA
- RVAAP-39 ..... LOAD LINE 5
- RVAAP-40 ..... LOAD LINE 7
- RVAAP-41 ..... LOAD LINE 8
- RVAAP-42 ..... LOAD LINE 9
- RVAAP-43 ..... LOAD LINE 10
- RVAAP-44 ..... LOAD LINE 11
- RVAAP-45 ..... WET STORAGE AREA
- RVAAP-46 ..... BUILDINGS F-15 AND F-16
- RVAAP-48 ..... ANCHOR TEST AREA
- RVAAP-50 ..... ATLAS SCRAP YARD
- RVAAP-51 ..... DUMP ALONG PARIS-WINDHAM ROAD
- RVAAP-66 ..... FACILITY-WIDE GROUNDWATER
- RVAAP-67 ..... FACILITY-WIDE SEWERS

COMPLIANCE RESTORATION SITES (13 SITES)

- CC-RVAAP-68 ..... ELECTRIC SUBSTATIONS (E,W,No.3)
- CC-RVAAP-69 ..... BUILDING 1048 - FIRE STATION
- CC-RVAAP-70 ..... EAST CLASSIFICATION YARD
- CC-RVAAP-72 ..... FACILITY-WIDE USTS (45 SITES)
- CC-RVAAP-73 ..... FACILITY-WIDE COAL STORAGE
- CC-RVAAP-74 ..... BUILDING 1034 MOTOR POOL HYDRAULIC LIFT
- CC-RVAAP-75 ..... GEORGE ROAD SEWAGE TREATMENT PLANT
- CC-RVAAP-76 ..... DEPOT AREA
- CC-RVAAP-77 ..... BUILDING 1037 LAUNDRY WASTE WATER SUMP
- CC-RVAAP-78 ..... QUARRY POND SURFACE DUMP
- CC-RVAAP-79 ..... DLA ORE STORAGE SITES
- CC-RVAAP-80 ..... GROUP 2 PROPELLANT CAN TOPS
- CC-RVAAP-83 ..... FORMER BUILDINGS 1031 AND 1039

MMRP SITES (14 SITES)

- RVAAP-001-R-01 ..... RAMSDELL QUARRY LANDFILL MRS
- RVAAP-002-R-01 ..... ERIE BURNING GROUNDS MRS
- RVAAP-004-R-01 ..... OPEN DEMOLITION AREA #2 MRS
- RVAAP-006-R-01 ..... LOAD LINE 1 MRS
- RVAAP-013-R-01 ..... FUZE AND BOOSTER QUARRY MRS
- RVAAP-030-R-01 ..... LANDFILL NORTH OF WINKLEPECK MRS
- RVAAP-032-R-01 ..... 40MM FIRING RANGE MRS
- RVAAP-038-R-01 ..... FIRESTONE TEST FACILITY MRS
- RVAAP-041-R-01 ..... SAND CREEK DUMP MRS
- RVAAP-050-R-01 ..... ATLAS SCRAP YARD MRS
- RVAAP-001-R-01 ..... BLOCK D IGLOO MRS
- RVAAP-051-R-01 ..... BLOCK D IGLOO -TD MRS
- RVAAP-065-R-01 ..... WATER WORKS #4 DUMP MRS
- RVAAP-065-R-01 ..... GROUP 8 MRS

- ..... CERCLA
- ..... RCRA
- ..... MMRP SITES
- ..... COMPLIANCE RESTORATION SITES - APPROVED
- ..... DLA ORE STORAGE AREAS (7 SITES)
- ..... COAL STORAGE AREAS (17 SITES)

RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

Figure 2
RVAAP
Facility Map

US Army Corps of Engineers
Louisville District

Ohio

APPENDIX A
LAND USE AND ENGINEERING CONTROLS FOR EACH AOC/MRS

APPENDIX A1

RVAAP-05 WINKLEPECK BURNING GROUND

LIST OF EACH AOC/MRS (WITH LUCS) IN APPENDIX A, SPECIFIC LUCS, AND REVISION DATES

AOC/MRS	Appendix Section	Land Use Controls	Date Section added to the PMP	Revision or Update

RVAAP 05 - Winklepeck Burning Grounds	A-1	The LUCs for the WBG AOC are as follows:
		• Land use of the WBG AOC shall be limited by the maintenance of the existing Camp Ravenna perimeter fence.
		• All activities executed within the WBG AOC must be in compliance with OHARNG range safety regulations, established digging restrictions, and established exposure limits.
		• The range will be marked with signage that is in conformance with the requirements of the most current Department of Army regulations.
		• Groundwater use or extraction of groundwater located at or underlying the WBG AOC or any portion thereof is prohibited, except for the following:
		  • The installation, development, purging, and sampling of new or existing monitoring wells in accordance with the most recent Facility-Wide Sampling and Analysis Plan (FWSAP) as part of the AOC-specific IRP or Facility-Wide Ground Water Monitoring Program Plan (FGWMPP).
		  • The abandonment and replacement of monitoring wells damaged by activities conducted on the Installation, and wells no longer utilized as part of IRP or FGWMPP activities, in accordance with Ohio EPA guidance, the most recent FWSAP and applicable Ohio Administrative Code requirements.
		  • All digging, intrusive activities, or excavation on the WBG AOC outside of the UXO/MEC-cleared areas within the Mark 19 Grenade Machinegun Range is prohibited with the following exceptions:
		  o Routine maintenance of roads, ditches, culverts, and activities listed in A-1.4 above.
		  o Ground surface repairs by authorized range personnel in support of authorized range activities.
		  o Digging along target array areas by authorized range personnel to a depth of 1 foot below ground surface.		

APPENDIX A-1: WINKLEPECK BURNING GROUNDS – (RVAAP-05)

A-1.1 BACKGROUND

The total burning ground area consists of 211.66 acres and has been in operation since 1941. Prior to 1980, burning was conducted on the bare ground and the ash was abandoned at the site. Wastes treated in the area included RDX, antimony sulfide, Composition B, lead azide, TNT, propellants, black powder, waste oil, sludge from the load lines, domestic wastes and small amounts of laboratory chemicals. From 1980 until 1998, periodic burning of scrap explosives, propellants, and explosive-contaminated waste materials (e.g., wipe rags, paper, and cardboard) was conducted in raised refractory-lined metal trays within a 1.5-acre area. A Part-B permit covering the active portion of the site was withdrawn in 1994. The burn-trays along the 90-day storage unit of Building 1601 were closed in accordance with Ohio EPA guidance in 1998. MEC is present in the AOC.

A-1.2 PUBLICATIONS

The following publications can be located on www.RVAAP.org or in established information repositories:

- Final Remedial Action Completion Report for RVAAP- 05 Winklepeck Burning Grounds Pads 61/61A, 67, and 70 at Ravenna Army Ammunition Plant. MKM Engineers. 19 Nov 2009.

- Final Contractor Quality Control Plan for the Remedial Action at RVAAP- 05 Winklepeck Burning Grounds at Ravenna Army Ammunition Plant. MKM Engineers. 17 Nov 2008.

- Final Explosives Safety Submission for the Munitions and Explosives of Concern Survey and Munitions Response of RVAAP- 05 Winklepeck Burning Grounds at Ravenna Army Ammunition Plant, Revision 3, Amendment 3. MKM Engineers. 9 Oct 2008.

- Final Project Management Plan for RVAAP-05 Winklepeck Burning Grounds Remedial Design/Remedial Action, Revision 2. MKM Engineers. 4 Sept 2008.

- Final Record of Decision for Soil and Dry Sediment at RVAAP- 05 Winklepeck Burning Grounds at Ravenna Army Ammunition Plant. SAIC. Aug 2008.

- Final Remedial Action Work Plan for RVAAP-05 Winklepeck Burning Grounds at Ravenna Army Ammunition Plant. MKM Engineers. 27 July 2008.

- Revised Final Report On The Biological Field-Truthing Effort At Winklepeck Burning Grounds At Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. Aug 2006.

- Final Sampling and Analysis Plan Addendum No. 2 for RVAAP- 05 Winklepeck Burning Grounds Feasibility Study. SAIC. Feb 2006.

- Proposed Plan for the Winklepeck Burning Grounds, Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. Dec 2005.

- Final Site Safety and Health Plan for the Phase II MEC Clearance and Munitions Response at RVAAP- 05 Winklepeck Burning Grounds. MKM Engineers. March 2005.

- Final Work Plan for Phase II MEC Clearance and Munitions Response at RVAAP- 05 Winklepeck Burning Grounds. MKM Engineers. March 1, 2005.

- Revised Final Focused Feasibility Study for RVAAP- 05 Winklepeck Burning Grounds. SAIC. March 2005.

- Final Phase I MEC Density Survey After Action Report at RVAAP- 05 Winklepeck Burning Grounds. MKM Engineers. 1 March 2005.

- Final Phase II Remedial Investigation Report for the Winklepeck Burning Grounds at RVAAP. SAIC. April 2001.

- Final Sampling and Analysis Plan and Site Safety and Health Plan Addendum No. 1 for the Winklepeck Burning Grounds Feasibility Study. SAIC. Oct 2000.

- Closure, Completion of Partial Closure of RVAAP-07 Building 1601 Hazardous Waste Storage and RVAAP- 05 Winklepeck Burning Grounds (WBG). Ohio EPA. 5 May 1999.

- Final Resource Conservation and Recovery Act (RCRA) Closure Field Investigation Report for the Deactivation Furnace Area, Open Detonation Area, Building 1601, and Pesticides Building at RVAAP. SAIC. June 1998.

- Final Sampling and Analysis Plan Addendum for the Phase II Remedial Investigation of the Winklepeck Burning Grounds and Determination of Facility-Wide Background at the Ravenna Army Ammunition Plant. SAIC. April 1998.

- Phase I Remedial Investigation Report for High Priority Areas of Concern at the Ravenna Army Ammunition Plant, Ravenna, Ohio. Final. SAIC. Feb 1998.

- Final Public Meeting Briefing Phase I Remedial Investigation of High Priority Areas of Concern at the Ravenna Army Ammunition Plant. SAIC. Sept 1997.

- Final Phase I Remedial Investigation Site Safety and Health Plan Addendum for High Priority Areas of Concern for the Ravenna Army Ammunition Plant. SAIC. July 1996.

- Final Phase I Remedial Investigation Sampling and Analysis Plan Addendum for High Areas of Concern for the Ravenna Army Ammunition Plant. SAIC. July 1996.

- Final Quality Control Plan for the Phase I Remedial Investigation for High Areas of Concern at RVAAP. SAIC. June 1996.

A-1.3 SITE LOCATION AND DESCRIPTION

Winklepeck Burning Ground (WBG) encompasses 211.66 acres and is located in the central portion of RVAAP as illustrated within Figure 1 of this PMP and Figure A-1 of this Appendix. The WBG tract of land exists in an open field within a gently rolling plain having a west to east run-off gradient with a network of looping gravel roads traversing past the once used burning pad areas. The former WBG is now under the administrative control of ARNG who licenses it for use to the OHARNG. It is classified as a small arms range. The training area was specifically remediated to support training with such weapons as the 40mm MK-19 machinegun using target practice rounds.

A-1.4 LAND USE AND ACTIVITIES

The Land Use for the WBG is *Small Arms Range* (including the existing Mark 19 Grenade Machinegun Range) OHARNG Military Use and Training. The Department of Army has classified the Small Arms Range as an Operational Range at the WBG AOC. The Small Arms Range Land Use was developed specifically for RVAAP to assess risks to OHARNG personnel. The Small Arms Range Land Use in terms of the Risk Assessment was created to assess specific training activities that would occur on a small arms range.

In addition to the small arms training certain activities are required to sustain and maintain the area as a range. The range, roads, targetry, etc. need to be maintained. Such routine maintenance and activities are permitted if conducted by authorized personnel. Maintenance activities such as the following will be performed by the National Guard Range Maintenance Soldier and/or other similar authorized personnel on the WBG AOC:

- maintenance of targetry and associated lifting mechanisms,
- range maintenance including, but not limited to, such activities as removal of target practice rounds from the ground surface within the impact area and clearing of target practice rounds from the surface of the range area,
- road and culvert repair,
- routine ditch maintenance,
- vegetation management; e.g., mowing, brush and weed cutting, controlled burning, and herbicide application,
- compatible natural resources management activities including but not limited to such activities as flora and fauna surveys and timber management (e.g., timber stand improvement, forest products harvesting, soil stabilization and erosion control, and invasive/non-native species control),
- nuisance wildlife control,
- drainage maintenance,

- wetland delineations,
- grassland management,
- scientific research, and
- sampling.

A-1.5 REMEDY OBJECTIVES

Where applicable, the previously applied remedy consisted of excavation of contaminated soil to preclude likely exposure through human contact at the WBG AOC. A portion of that remedy resulted in hazardous substances, pollutants, or contaminants remaining greater than levels that allow unlimited use and unrestricted exposure. Therefore a component of the remedial action includes Land Use Controls (LUCs) (see item A-1.6 below). Because LUCs will be used as part of the remedy, any property owner subsequent to the federal government will be required to enter into an environmental covenant meeting the requirements of ORC Section 5301.82.

A-1.6 LAND USE CONTROLS

The WBG AOC-specific LUCs were designed considering specific parameters developed for personnel exposure established for the National Guard Range Maintenance Soldier exposure scenario. This Exposure Scenario is specific to the National Guard Range Maintenance Soldier and is based on an exposure of 85 days per year at 6 hours per day for a maximum of 25 years (reference RVAAP Facility-Wide Human Health Risk Assessor Manual with Amendment 1 – USACE 2005).

The LUCs for the WBG AOC are as follows:

- Land use of the WBG AOC shall be limited by the maintenance of the existing Camp Ravenna perimeter fence.
- All activities executed within the WBG AOC must be in compliance with OHARNG range safety regulations, established digging restrictions, and established exposure limits.
- The range will be marked with signage that is in conformance with the requirements of the most current Department of Army regulations.
- Groundwater use or extraction of groundwater located at or underlying the WBG AOC or any portion thereof is prohibited, except for the following:
  - The installation, development, purging, and sampling of new or existing monitoring wells in accordance with the most recent Facility-Wide Sampling and Analysis Plan (FWSAP) as part of the AOC-specific IRP or Facility-Wide Ground Water Monitoring Program Plan (FGWMPP).
  - The abandonment and replacement of monitoring wells damaged by activities conducted on the Installation, and wells no longer utilized as part of IRP or

FGWMPP activities, in accordance with Ohio EPA guidance, the most recent FWSAP, and applicable Ohio Administrative Code requirements.

- All digging, intrusive activities, or excavation on the WBG AOC outside of the UXO/MEC-cleared areas within the Mark 19 Grenade Machinegun Range is prohibited with the following exceptions:
  - Routine maintenance of roads, ditches, culverts, and activities listed in A-1.4 above.
  - Ground surface repairs by authorized range personnel in support of authorized range activities.
  - Digging along target array areas by authorized range personnel to a depth of 1 foot below ground surface.

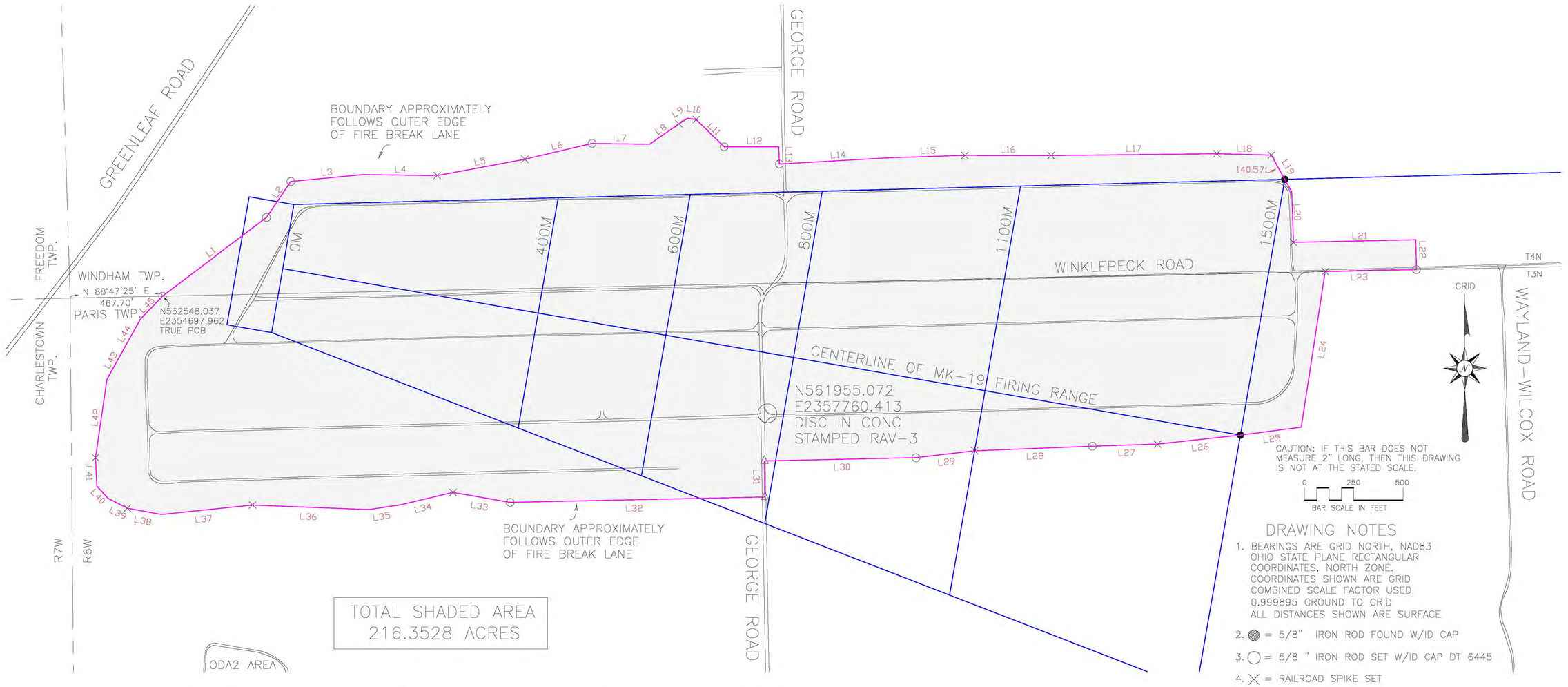
A-1.7 MONITORING AND REPORTING

Periodic monitoring of LUCs in the form of site inspections will be conducted by the Army to confirm that the LUCs remain effective and still meet LUC objectives for continued remedy protectiveness. Site inspections will be conducted on a quarterly basis.

The Quarterly WBG-LUC Inspection Reports will be submitted to the Ohio EPA for review and approval as they are completed. The WBG-LUC Inspection Forms for WBG and other AOCs/MRSs will be summarized in an Annual LUC Report for each year. The Annual LUC Report will be submitted to the Ohio EPA for review and approval.

The Annual LUC Report will evaluate the status and effectiveness of LUCs with a description of how any LUC deficiencies or inconsistent uses were addressed. The Annual LUC Reports will be used in part for the preparation of the CERCLA 121(c) Five-Year Review. As part of the Annual LUC Report, a written certification will be submitted stating whether or not the LUCs remain in place and are effective.

FIGURE A-1 – AERIAL PHOTOGRAPH
WINKLEPECK BURNING GROUNDS – APPROXIMATELY 200 ACRES (Red Outline)



TOTAL SHADED AREA
216.3528 ACRES

ODA2 AREA

CAUTION: IF THIS BAR DOES NOT MEASURE 2" LONG, THEN THIS DRAWING IS NOT AT THE STATED SCALE.

0 250 500

BAR SCALE IN FEET

DRAWING NOTES

1. BEARINGS ARE GRID NORTH, NAD83 OHIO STATE PLANE RECTANGULAR COORDINATES, NORTH ZONE. COORDINATES SHOWN ARE GRID COMBINED SCALE FACTOR USED 0.999895 GROUND TO GRID ALL DISTANCES SHOWN ARE SURFACE
2. ● = 5/8" IRON ROD FOUND W/ID CAP
3. ○ = 5/8 " IRON ROD SET W/ID CAP DT 6445
4. × = RAILROAD SPIKE SET
5. △ = MAG NAIL SET

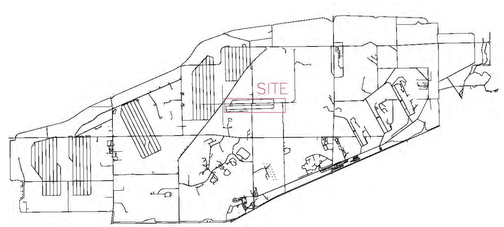
CAMP RAVENNA AUGUST 2012

SURVEY TO ESTABLISH THE BOUNDARY OF LANDS KNOWN AS RVAAP-05 WINKLEPECK BURNING GROUNDS

SITUATED PARTLY IN THE TOWNSHIPS OF WINDHAM AND PARIS, COUNTY OF PORTAGE AND STATE OF OHIO

CAMP RAVENNA AREA MAP

AUGUST 13, 2012



FKA THE RAVENNA ARMY AMMUNITION PLANT

Line#	BEARING	DISTANCE
L1	N 52°59'21" E	659.49'
L2	N 34°06'02" E	219.80'
L3	N 84°36'02" E	371.33'
L4	S 89°13'26" E	371.33'
L5	N 79°24'55" E	451.59'
L6	N 76°46'35" E	349.56'
L7	S 89°10'58" E	291.09'
L8	N 55°18'29" E	180.65'
L9	N 56°59'42" E	52.70'
L10	S 81°48'09" E	44.08'
L11	S 45°34'25" E	197.45'
L12	N 89°58'50" E	276.97'

Line#	BEARING	DISTANCE
L13	S 01°50'55" E	87.54'
L14	N 86°44'52" E	568.89'
L15	N 88°13'22" E	371.25'
L16	S 89°54'52" E	436.37'
L17	N 89°22'55" E	839.76'
L18	S 88°35'40" E	275.63'
L19	S 29°03'23" E	212.85'
L20	S 02°01'00" E	255.87'
L21	N 88°47'25" E	619.42'
L22	S 01°12'35" E	150.00'
L23	S 88°47'25" W	461.86'
L24	S 08°45'19" W	796.83'

Line#	BEARING	DISTANCE
L25	S 82°37'22" W	310.68'
L26	S 83°47'31" W	421.73'
L27	S 88°08'36" W	330.78'
L28	S 87°45'36" W	596.41'
L29	S 83°20'17" W	299.17'
L30	S 88°45'17" W	767.00'
L31	S 00°39'03" E	182.36'
L32	S 88°47'08" W	1289.73'
L33	N 80°07'59" W	294.32'
L34	S 76°37'59" W	270.37'
L35	S 81°24'50" W	163.93'
L36	N 87°46'01" W	590.54'

Line#	BEARING	DISTANCE
L37	S 84°05'16" W	463.28'
L38	N 79°35'28" W	175.10'
L39	N 62°42'00" W	109.80'
L40	N 42°23'51" W	84.01'
L41	N 02°41'22" W	143.84'
L42	N 08°17'11" E	400.09'
L43	N 28°55'47" E	189.17'
L44	N 29°19'06" E	160.50'
L45	N 43°45'06" E	160.50'

STATE OF OHIO
DONALD TROCCHIO
6445
REGISTERED SURVEYOR

VISTA SCIENCES CORPORATION
Ravenna Army Ammunition Plant
8451 State Route 5
Building 1037
Ravenna OH 44266
Don Trocchio
Registered Surveyor #6445
(330) 358-7311
Don.Trocchio@us.army.mil

PRODUCED FOR:
US Army Corps of Engineers
THE USACE LOUISVILLE DISTRICT
600 DR. MARTIN LUTHER KING PL.
LOUISVILLE, KY 40202

RVAAP-05
THE WINKLEPECK BURNING GROUNDS
METES AND BOUNDS LEGAL DESCRIPTION
AUGUST 10, 2012

SITUATED IN THE TOWNSHIPS OF WINDHAM AND PARIS, COUNTY OF PORTAGE AND STATE OF OHIO AND IS FURTHER DESCRIBED AS FOLLOWS;

BEGINNING AT THE NORTHWEST CORNER OF SAID PARIS TOWNSHIP, RANGE 6 WEST, TOWNSHIP 3 NORTH IN THE CONNECTICUT WESTERN RESERVE;

THENCE ALONG THE DIVIDING LINE BETWEEN PARIS AND WINDHAM TOWNSHIP NORTH 88 DEGREES 47 MINUTES 25 SECONDS EAST A DISTANCE OF 467.70 FEET BUT TO A 5/8 INCH DIAMETER IRON ROD SET FLUSH WITH A PLASTIC ID CAP "DON TROCCHIO RS6445" AND THE TRUE PLACE OF BEGINNING FOR THIS PARCEL OF LAND; THIS TRUE PLACE OF BEGINNING HAS OBSERVED NAD83 OHIO STATE PLANE RECTANGULAR GRID COORDINATES, NORTH ZONE, OF N562548.037 E2354697.962;

THENCE THE FOLLOWING TWELVE (12) COURSES AND DISTANCES ROUGHLY FOLLOWING THE OUTER EDGE OF THE FIRE BREAK LANE (L1 TO L12);

L1 THENCE NORTH 52 DEGREES 59 MINUTES 21 SECONDS EAST A DISTANCE OF 659.49 FEET BUT TO A 5/8 INCH DIAMETER IRON ROD SET FLUSH WITH A PLASTIC ID CAP "DON TROCCHIO RS6445";

L2 THENCE NORTH 34 DEGREES 06 MINUTES 02 SECONDS EAST A DISTANCE OF 219.80 FEET BUT TO A 5/8 INCH DIAMETER IRON ROD SET FLUSH WITH A PLASTIC ID CAP "DON TROCCHIO RS6445";

L3 THENCE NORTH 84 DEGREES 36 MINUTES 02 SECONDS EAST A DISTANCE OF 371.33 FEET;

L4 THENCE SOUTH 89 DEGREES 13 MINUTES 26 SECONDS EAST A DISTANCE OF 371.33 FEET BUT TO A RAILROAD SPIKE SET;

L5 THENCE NORTH 79 DEGREES 24 MINUTES 55 SECONDS EAST A DISTANCE OF 451.59 FEET BUT TO A RAILROAD SPIKE SET;

L6 THENCE NORTH 76 DEGREES 46 MINUTES 35 SECONDS EAST A DISTANCE OF 349.56 FEET BUT TO A 5/8 INCH DIAMETER IRON ROD SET FLUSH WITH A PLASTIC ID CAP "DON TROCCHIO RS6445";

L7 THENCE SOUTH 89 DEGREES 10 MINUTES 58 SECONDS EAST A DISTANCE OF 291.09 FEET;

L8 THENCE NORTH 55 DEGREES 18 MINUTES 29 SECONDS EAST A DISTANCE OF 180.65 FEET BUT TO A RAILROAD SPIKE SET;

L9 THENCE NORTH 56 DEGREES 59 MINUTES 42 SECONDS EAST A DISTANCE OF 52.70 FEET;

L10 THENCE SOUTH 81 DEGREES 48 MINUTES 09 SECONDS EAST A DISTANCE OF 44.08 FEET BUT TO A RAILROAD SPIKE SET;

L11 THENCE SOUTH 45 DEGREES 34 MINUTES 25 SECONDS EAST A DISTANCE OF 197.45 FEET BUT TO A 5/8 INCH DIAMETER IRON ROD SET FLUSH WITH A PLASTIC ID CAP "DON TROCCHIO RS6445";

L12 THENCE NORTH 89 DEGREES 58 MINUTES 50 SECONDS EAST A DISTANCE OF 276.97 FEET;

L13 THENCE SOUTH 01 DEGREES 50 MINUTES 55 SECONDS EAST A DISTANCE OF 87.54 FEET BUT TO A 5/8 INCH DIAMETER IRON ROD SET FLUSH WITH A PLASTIC ID CAP "DON TROCCHIO RS6445";

THENCE THE FOLLOWING SEVENTEEN (17) COURSES AND DISTANCES ROUGHLY FOLLOWING THE OUTER EDGE OF THE FIRE BREAK LANE (L14 TO L30);

L14 THENCE NORTH 86 DEGREES 44 MINUTES 52 SECONDS EAST A DISTANCE OF 568.89 FEET;

L15 THENCE NORTH 88 DEGREES 13 MINUTES 22 SECONDS EAST A DISTANCE OF 371.25 FEET BUT TO A RAILROAD SPIKE SET;

L16 THENCE SOUTH 89 DEGREES 54 MINUTES 52 SECONDS EAST A DISTANCE OF 436.37 FEET BUT TO A RAILROAD SPIKE SET;

L17 THENCE NORTH 89 DEGREES 22 MINUTES 55 SECONDS EAST A DISTANCE OF 839.76 FEET BUT TO A RAILROAD SPIKE SET;

L18 THENCE SOUTH 88 DEGREES 35 MINUTES 40 SECONDS EAST A DISTANCE OF 275.63 FEET BUT TO A RAILROAD SPIKE SET;

L19 THENCE SOUTH 29 DEGREES 03 MINUTES 23 SECONDS EAST A DISTANCE OF 212.85 FEET AND PASSING OVER A 5/8 INCH DIAMETER IRON ROD FOUND FLUSH WITH A PLASTIC ID CAP "DON TROCCHIO RS6445" AT THE NORTHERLY END OF THE MK-19 RANGE 1500M TARGET ARRAY LINE AT A DISTANCE OF 140.57 FEET;

L20 THENCE SOUTH 02 DEGREES 01 MINUTES 00 SECONDS EAST A DISTANCE OF 255.87 FEET BUT TO A RAILROAD SPIKE SET;

L21 THENCE PARALLEL TO THE AFORESAID TOWNSHIP DIVIDING LINE AND ABOUT 150 FEET NORTHERLY THEREFROM BY A RECTANGULAR MEASUREMENT NORTH 88 DEGREES 47 MINUTES 25 SECONDS EAST A DISTANCE OF 619.42 FEET;

L22 THENCE CROSSING WINKLEPECK ROAD SOUTH 01 DEGREES 12 MINUTES 35 SECONDS EAST A DISTANCE OF 150.00 FEET BUT TO A 5/8 INCH DIAMETER IRON ROD SET FLUSH WITH A PLASTIC ID CAP "DON TROCCHIO RS6445";

L23 THENCE APPROXIMATELY ALONG THE SAID TOWNSHIP DIVIDING LINE SOUTH 88 DEGREES 47 MINUTES 25 SECONDS WEST A DISTANCE OF 461.86 FEET BUT TO A RAILROAD SPIKE SET;

L24 THENCE ALONG THE APPROXIMATE CENTER OF A FORMER RAILROAD TRACK SOUTH 08 DEGREES 45 MINUTES 19 SECONDS WEST A DISTANCE OF 796.83 FEET;

L25 THENCE SOUTH 82 DEGREES 37 MINUTES 22 SECONDS WEST A DISTANCE OF 310.68 FEET BUT TO A 5/8 INCH DIAMETER IRON ROD FOUND FLUSH WITH A PLASTIC ID CAP "DON TROCCHIO RS6445" AT THE MIDPOINT OF THE 1500M TARGET ARRAY LINE AT ITS INTERSECTION WITH THE CENTERLINE OF THE MK-19 RANGE;

L26 THENCE SOUTH 83 DEGREES 47 MINUTES 31 SECONDS WEST A DISTANCE OF 421.73 FEET BUT TO A RAILROAD SPIKE SET;

L27 THENCE SOUTH 88 DEGREES 08 MINUTES 36 SECONDS WEST A DISTANCE OF 330.78 FEET BUT TO A 5/8 INCH DIAMETER IRON ROD SET FLUSH WITH A PLASTIC ID CAP "DON TROCCHIO RS6445";

L28 THENCE SOUTH 87 DEGREES 45 MINUTES 36 SECONDS WEST A DISTANCE OF 596.41 FEET BUT TO A RAILROAD SPIKE SET AT THE INTERSECTION OF THE 1100M TARGET ARRAY LINE;

L29 THENCE SOUTH 83 DEGREES 20 MINUTES 17 SECONDS WEST A DISTANCE OF 299.17 FEET BUT TO A 5/8 INCH DIAMETER IRON ROD SET FLUSH WITH A PLASTIC ID CAP "DON TROCCHIO RS6445";

L30 THENCE SOUTH 88 DEGREES 45 MINUTES 17 SECONDS WEST A DISTANCE OF 767.00 FEET BUT TO A MAG NAIL SET IN THE APPROXIMATE MIDDLE OF THE GEORGE ROAD PAVEMENT;

L31 THENCE ALONG THE APPROXIMATE MIDDLE OF THE GEORGE ROAD PAVEMENT SOUTH 00 DEGREES 39 MINUTES 03 SECONDS EAST A DISTANCE OF 182.36 FEET BUT TO A MAG NAIL SET;

THENCE THE FOLLOWING FOURTEEN (14) COURSES AND DISTANCES ROUGHLY FOLLOWING THE OUTER EDGE OF THE FIRE BREAK LANE (L32 TO L45);

L32 THENCE SOUTH 88 DEGREES 47 MINUTES 08 SECONDS WEST A DISTANCE OF 1289.73 FEET BUT TO A 5/8 INCH DIAMETER IRON ROD SET FLUSH WITH A PLASTIC ID CAP "DON TROCCHIO RS6445";

L33 THENCE NORTH 80 DEGREES 07 MINUTES 59 SECONDS WEST A DISTANCE OF 294.32 FEET BUT TO A RAILROAD SPIKE SET;

L34 THENCE SOUTH 76 DEGREES 37 MINUTES 59 SECONDS WEST A DISTANCE OF 270.37 FEET;

L35 THENCE SOUTH 81 DEGREES 24 MINUTES 50 SECONDS WEST A DISTANCE OF 163.93 FEET;

L36 THENCE NORTH 87 DEGREES 46 MINUTES 01 SECONDS WEST A DISTANCE OF 590.54 FEET BUT TO A RAILROAD SPIKE SET;

L37 THENCE SOUTH 84 DEGREES 05 MINUTES 16 SECONDS WEST A DISTANCE OF 463.28 FEET;

L38 THENCE NORTH 79 DEGREES 35 MINUTES 28 SECONDS WEST A DISTANCE OF 175.10 FEET BUT TO A RAILROAD SPIKE SET;

L39 THENCE NORTH 62 DEGREES 42 MINUTES 00 SECONDS WEST A DISTANCE OF 109.80 FEET;

L40 THENCE NORTH 42 DEGREES 23 MINUTES 51 SECONDS WEST A DISTANCE OF 84.01 FEET;

L41 THENCE NORTH 02 DEGREES 41 MINUTES 22 SECONDS WEST A DISTANCE OF 143.84 FEET BUT TO A RAILROAD SPIKE SET;

L42 THENCE NORTH 08 DEGREES 17 MINUTES 11 SECONDS EAST A DISTANCE OF 400.09 FEET;

L43 THENCE NORTH 28 DEGREES 55 MINUTES 47 SECONDS EAST A DISTANCE OF 189.17 FEET;

L44 THENCE NORTH 29 DEGREES 19 MINUTES 06 SECONDS EAST A DISTANCE OF 160.50 FEET;

L45 THENCE NORTH 43 DEGREES 45 MINUTES 06 SECONDS EAST A DISTANCE OF 160.50 FEET BUT TO THE TRUE PLACE OF BEGINNING AND CONTAINING 216.3528 ACRES OF LAND ALL BE THE SAME MORE OR LESS AS SURVEYED AND DESCRIBED IN AUGUST 2012 BY DON TROCCHIO REGISTERED SURVEYOR NO.6445;

BEARINGS USED ARE GRID NORTH; COORDINATES USED ARE ORIGINATING FROM A BRASS DISC FOUND IN CONCRETE STAMPED "RAV-3" WITH PUBLISHED NAD83 OHIO STATE PLANE RECTANGULAR GRID COORDINATES, NORTH ZONE, OF N561955.072 E2357760.413;

10 AUGUST 2012

APPENDIX A2

RVAAP-01 RAMSDELL QUARRY LANDFILL

LIST OF EACH AOC/MRS (WITH LUCS) IN APPENDIX A, SPECIFIC LUCS, AND REVISION DATES

AOC/MRS	Appendix Section	Land Use Controls	Date Section added to the PMP	Revision or Update
RVAAP-01 Ramsdell Quarry Landfill	A-2	The LUCs for the RQL AOC are as follows: • Maintenance of the 6 ft high chain-link security fence at the northern perimeter of RQL and a five-strand, high tensile wire fence at the eastern, southern, and western perimeters. Maintenance of the closed sanitary landfill. • All activities must be in compliance with established digging restrictions and established exposure limits. o All digging or excavation within the quarry bottom is prohibited due to the residual asbestos and contamination. o Digging and excavation on the landfill cap is regulated by the post-closure care plan and the Ohio solid waste regulations. • Permanent warning signs will be installed and maintained around RQL on the gates and on the chain-link and high tensile wire fence at 300 ft centers to warn of the ACM hazard in the quarry bottom. The signs will meet the requirements of OAC 3745-20-07(B)(1)(b). • As no soil disturbing activities are allowed within the quarry bottom, OSHA asbestos awareness training set forth at 29 CFR 1926.1101(k)(9)(vii) is not required. Any personnel entering the quarry bottom will be briefed of the asbestos hazards.		

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APPENDIX A-2: RAMSDELL QUARRY LANDFILL – (RVAAP-01)

A-2.1. BACKGROUND

Ramsdell Quarry Landfill (RQL) was initially a stone quarry that operated until 1941. During operations, the quarry was excavated 30 to 40 ft below existing grade. The excavated sandstone and quartzite pebble conglomerate was used for road and construction ballast. From 1946 to the 1950s, the bottom of the quarry was used to burn waste explosives from Load Line 1. Reportedly, 18,000 500-lb (225-kg) incendiary or napalm bombs were burned and liquid residues from annealing operations were disposed of in the quarry.

Between 1941 and 1989, the western and southern sections of the abandoned quarry were used for landfill operations. No information is available regarding landfill disposal activities from 1941 to 1976, and no information is available on other activities at the quarry from the 1950s to 1976. Only nonhazardous solid waste was deposited in RQL from 1976 until it was closed in 1989. In 1978, a portion of the abandoned quarry was permitted as a sanitary landfill by the State of Ohio. The sanitary landfill was closed in 1990 under State of Ohio solid waste regulations. A clay cap was placed on the former permitted landfill area covering approximately 4 acres of the AOC.

A-2.2. PUBLICATIONS

The following publications can be located on www.rvaap.org or in established information repositories:

- Final Record of Decision Amendment for the RVAAP-01 Ramsdell Quarry Landfill at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. 24 May 2012.
- Revised Final Modified Proposed Plan for Soil and Dry Sediment at RVAAP-01 Ramsdell Quarry Landfill at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC 2012. 6 June 2012.
- Final Engineering Evaluation for Soil and Dry Sediment at RVAAP-01 Ramsdell Quarry Landfill at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. 2 September 2011.
- Revised Final Remedial Design for RVAAP-01 Ramsdell Quarry Landfill at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. 17 June 2010.
- Final Record of Decision for the RVAAP-01 Ramsdell Quarry Landfill at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. 24 March 2009.
- Wetlands and Other Waters Delineation Report Remedial Action Areas at Ramsdell Quarry Landfill, Load Line 12, and Fuze and Booster Quarry Landfill/Ponds at the Ravenna Army

Ammunition Plant and Ravenna Training and Logistics Site, Ravenna, Ohio. EnviroScience. 29 December 2008.

- Final Proposed Plan for Soil and Dry Sediment at Ramsdell Quarry Landfill (RVAAP-01) at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. March 2007

- Revised Final Feasibility Study for Ramsdell Quarry Landfill (RVAAP-01) at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. October 2006.

- Final Sampling and Analysis Plan Addendum No. 2 for the Phase I Remedial Investigation of Ramsdell Quarry Landfill at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. June 2006

- Final Phase I Remedial Investigation Report for Ramsdell Quarry Landfill at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. September 2005

- Final Project Management Plan Performance-Based Contract for Six Environmental Areas of Concern at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. 14 July 2005

- Final Phase I Remedial Investigation December 2004 Follow-On Groundwater Sampling at RVAAP-01 Ramsdell Quarry Landfill at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. June 2005.

- Final Site Safety and Health Plan Addendum No. 1 for the Phase I Remedial Investigation of Ramsdell Quarry Landfill at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. October 2003.

- Final Sampling and Analysis Plan Addendum No. 1 for the Phase I Remedial Investigation of Ramsdell Quarry Landfill at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. October 2003.

- Final Report on the Groundwater Investigation of the Ramsdell Quarry Landfill at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. August 2000.

- April 1999 Quarterly Monitoring Report, Ramsdell Quarry Groundwater Investigation at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. 4 June 1999.

- Final February 1999 Quarterly Monitoring Report, Ramsdell Quarry Groundwater Investigation at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. 15 April 1999.

- Final Initial Phase Report, Groundwater Investigation, Ramsdell Quarry Landfill at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. January1999.

- Final October 1998 Quarterly Monitoring Report, Ramsdell Quarry Groundwater Investigation at the Ravenna Army Ammunition Plant, Ravenna, Ohio. 30 December 1998.

- Final Sampling and Analysis Plan Addendum for the Groundwater Investigation of the Former Ramsdell Quarry Landfill at the Ravenna Army Ammunition Plant, Ravenna, Ohio. SAIC. June 1998.

- Final Closure Inspection of RVAAP-01 Ramsdell Quarry Landfill at the Ravenna Army Ammunition Plant, Ravenna, Ohio. Ohio EPA. September 1990.

A-2.3. SITE LOCATION AND DESCRIPTION

RQL encompasses approximately 14 acres in the northeastern portion of Camp Ravenna. RQL includes old-field communities with patches of forests and grasslands. The land surface in a large portion of the AOC slopes into a former quarry, which occupies most of the AOC. The quarry bottom is about 40 ft below the surrounding area. Former quarry operations resulted in the removal of much of the original soil.

Surface water runoff collects in an isolated wetland in the bottom of the former quarry. There is no surface water drainage outlet from the quarry. When water is present in the wetland, the water depth is usually less than 4 ft. The drainage ways and ditch lines outside of the quarry, located along access roads and the former rail line in the southern part of the AOC, only contain water during rain events.

A-2.4. LAND USE

RQL will be managed as restricted access due to residual asbestos and contamination and the closed landfill at the AOC.

A-2.5. REMEDY OBJECTIVES

Where applicable, the previously applied remedies at RQL consisted of excavation of contaminated soil and installation of the fence to preclude likely exposure through human contact. Following these remedies, hazardous substances, pollutants, or contaminants remained at levels greater than those that allow unlimited use and unrestricted exposure. Therefore a component of the remedial action includes Land Use Controls (LUCs) (see item A-2.6 below). Because LUCs will be used as part of the remedy, any property owner subsequent to the federal government will be required to enter into an environmental covenant meeting the requirements of ORC Section 5301.82.

A-2.6. LAND USE CONTROLS

The RQL AOC-specific LUCs were designed considering specific parameters developed for Restricted Access. The LUCs for RQL are as follows:

- All activities must be in compliance with established digging restrictions and established exposure limits.
  - All digging or excavation within the quarry bottom is prohibited due to the residual asbestos and contamination.
  - Digging and excavation on the landfill cap will be regulated by the post-closure care plan and the Ohio solid waste regulations.
- Permanent warning signs will be installed and maintained around RQL on the gates and on the chain-link and high tensile wire fence at 300 ft centers to warn of the ACM hazard in the quarry bottom. The signs will meet the requirements of OAC 3745-20-07(B)(1)(b).
- As no soil disturbing activities are allowed within the quarry bottom, OSHA asbestos awareness training set forth at 29 CFR 1926.1101(k)(9)(vii) is not required. Any personnel entering the quarry bottom will be briefed of the asbestos hazards.

A-2.7. MONITORING AND REPORTING

Periodic monitoring of LUCs, in the form of site inspections, will be conducted by the Army to confirm that the LUCs remain effective and still meet LUC objectives for continued remedy protectiveness. Site inspections will be conducted on an annual basis. Inspections of the solid waste landfill will be conducted in accordance with State of Ohio solid waste regulations and the Ohio Environmental Protection Agency (Ohio EPA) *Director's Final Findings and Orders* (Ohio EPA 2004).

The Annual RQL-LUC Inspection Reports will be submitted to the Ohio EPA for review and approval as they are completed. The RQL-LUC Inspection Forms for RQL and other AOCs/MRSs will be summarized in an Annual LUC Report for each year. The Annual LUC Report will be submitted to the Ohio EPA for review and approval.

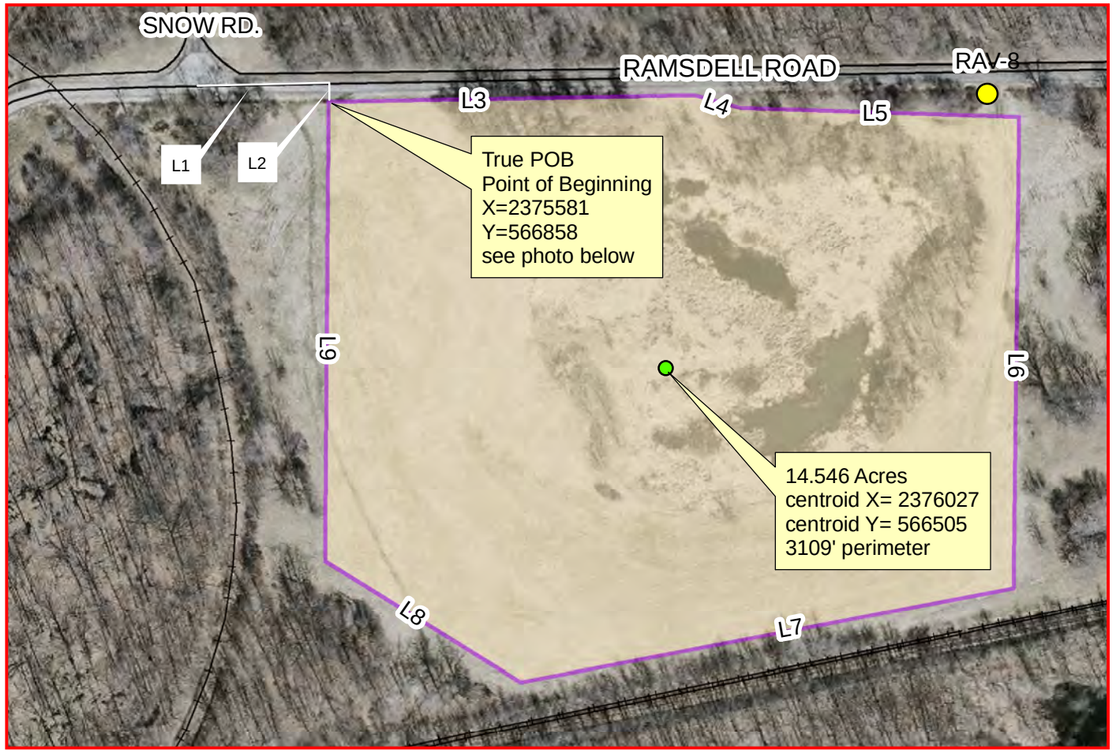
The Annual LUC Report will evaluate the status and effectiveness of LUCs with a description of how any LUC deficiencies or inconsistent uses were addressed. The Annual LUC Reports will be used in part for the preparation of the CERCLA 121(c) Five-Year Review. As part of the Annual LUC Report, a written certification will be submitted stating whether or not the LUCs remain in place and are effective.

Appendix A-3. Metes and Bounds Survey

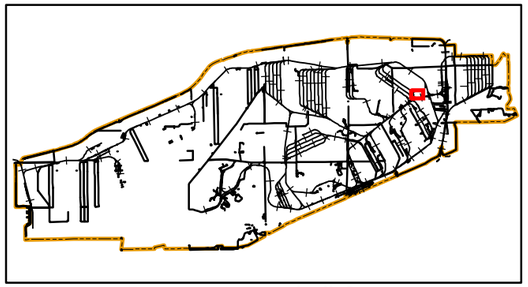
Grid coordinates are originating from a brass tablet found set in concrete stamped "RAV-8 US CORPS OF ENGINERS with published coordinates of X=2376450.821 Y=566867.007 NAD83 Ohio, North Zone 3401

Line L1 N89deg 07' 09" E 172.85'
Line L2 S00deg 29' 46"W 21.11' to true POB

Line L3 N88deg 59' 18"E 482.95'
Line L4 S74deg 38' 20"E 61.75'
Line L5 S88deg 06' 25"E 368.70'
Line L6 S00deg 42' 08"W 622.69'
Line L7 S79deg 10' 38"W 662.10'
Line L8 N58deg 13' 29"W 303.74'
Line L9 N00deg 29' 46"E 607.05' back to true POB



Camp Ravenna
Joint Military Training Center



Portage & Trumbull County

LOCATOR MAP

Ohio Army National Guard

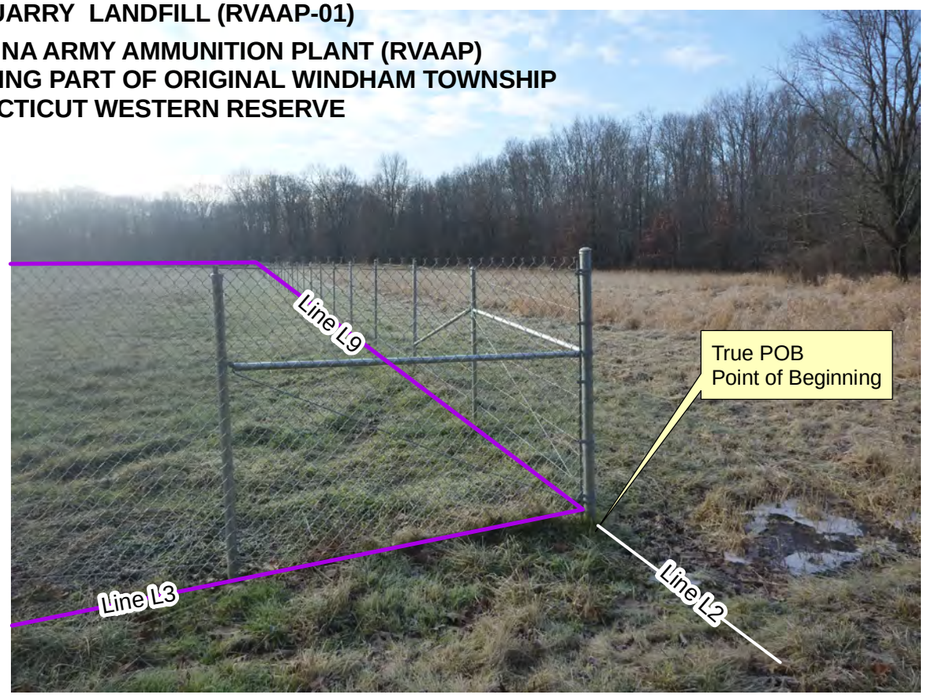
BOUNDARY SURVEY OF THE FORMER RAMSDELL QUARRY LANDFILL (RVAAP-01)

CAMP RAVENNA JOINT MILITARY TRAINING CENTER FKA RAVENNA ARMY AMMUNITION PLANT (RVAAP)
SITUATED IN THE COUNTY OF PORTAGE AND STATE OF OHIO AND BEING PART OF ORIGINAL WINDHAM TOWNSHIP
TOWNSHIP 4 NORTH, RANGE 6 WEST IN THE CONNECTICUT WESTERN RESERVE

Legend

= Existing "As-Constructed" Fence

= Ramsdell Quarry Landfill



Produced in December 2014 for:

US Army Corps of Engineers
600 Dr. Martin Luther King Jr. Place
Louisville, KY 40202

Louisville District

Projection Datum is NAD83, Ohio State Plane Rectangular Grid, North Zone
Bearings are Grid North

0 100 200 400 600
Bar Scale in Feet

Camp Ravenna JMTC
1438 State Route 534 SW
Newton Falls, OH 44444
Don Trocchio, PS
don.trocchio@us.army.mil

MGRS 17T NF01946150 (NAD83)

Metes and Bounds Legal Description of the Former Ramsdell Quarry Landfill (RVAAP-01)

Camp Ravenna Joint Military Training Center FKA Ravenna Army Ammunition Plant

Situated in the County of Portage and State of Ohio and known as being part of original Windham Township, Township 4 North, Range 6 West in the Connecticut Western Reserve;

Beginning at the approximate pavement centerline intersection of Snow Road and Ramsdell Road;

Line L1 Thence along the approximate Ramsdell Road centerline of pavement N89deg 07' 09"E a distance of 172.85 feet;

Line L2 Thence S00deg 29' 46"W a distance of 21.11 feet but to an existing corner fence post assembly and the true place of beginning for the following described parcel of land; said true place of beginning has observed NAD83 grid coordinates of X=2375581 Y=566858;

Thence the following seven (7) courses and distances intending to follow the as-constructed fence enclosing said parcel of land;

Line L3 Thence N88deg 59' 18"E a distance of 482.95 feet but to a fence post assembly at an angle in said fence line;

Line L4 Thence S74deg 38' 20"E a distance of 61.75 feet but to a fence post assembly at an angle in said fence line;

Line L5 Thence S88deg 06' 25"E a distance of 368.70' feet but to a corner fence post assembly at the northeast corner of the site;

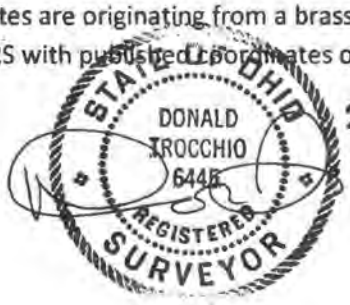
Line L6 Thence S00deg 42' 08"W a distance of 622.69 feet but to a corner fence post assembly at the southeast corner of the site;

Line L7 Thence S79deg 10' 38"W a distance of 662.10' feet but to a fence post assembly at an angle in said fence line;

Line L8 Thence N58deg 13' 29"W a distance of 303.74' feet but to a fence post assembly at an angle in said fence line;

Line L9 Thence N00deg 29' 46"E a distance of 607.05' feet but to the true place of beginning and containing a total of 14.546 acres of land all be the same more or less as surveyed and described in December 2014 by Don Trocchio Registered Professional Ohio Surveyor No.6445 of Vista Sciences, Inc;

Note: Bearings used are Grid North; Grid coordinates are originating from a brass tablet found set in concrete stamped "RAV-8 US CORPS OF ENGINERS with published coordinates of X=2376450.821 Y=566867.007 NAD83, Ohio North Zone 3401;



24 Dec. 2014

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Appendix A-4. Land Use Control Inspection Form for RVAAP-01 Ramsdell Quarry Landfill Area of Concern

Camp Ravenna Joint Military Training Center (Camp Ravenna)/ Former Ravenna Army Ammunition Plant (RVAAP) Land Use Control (LUC) Inspection Form for RVAAP-01 Ramsdell Quarry Landfill Area of Concern (AOC)

In accordance with the Camp Ravenna/former RVAAP Property Management Plan (PMP) dated August 2012 and Appendix A-2 and the Final Remedial Design for Soil and Dry Sediment at RVAAP-01 Ramsdell Quarry Landfill (RQL), a LUC inspection of RQL was conducted by_____ _____ on _____.

According to LUCs set forth in the *Final Remedial Design for Soil and Dry Sediment at the RVAAP-01 Ramsdell Quarry Landfill*, dated 9 April 2014, and memorialized in the PMP, periodic monitoring of LUCs, in the form of site inspections, is required to be conducted by the Army to confirm that the LUCs remain effective and still meet LUC objectives for continued remedy protectiveness. Site inspections are required to be conducted on an annual basis and inspections of the solid waste landfill are conducted in accordance with State of Ohio solid waste regulations and the Ohio Environmental Protection Agency (Ohio EPA) Director's Final Findings and Orders (Ohio EPA 2004). Additional LUC inspections may be conducted when landfill inspections are conducted as needed. The required Annual LUC Report is to be submitted to the Ohio EPA for review and approval.

The inspections shall include the following:

- Review of LUC training/inbriefs/maintenance and access logs and other documentation as applicable to RQL.
- Evaluation of activities at RQL to ensure that all activities executed within RQL are in compliance with the established digging restrictions and established exposure limits (Security Guard/Maintenance Worker - one (1) hour/day for 250 days/year for 25 years).
    - All digging or excavation within the quarry bottom is prohibited due to residual asbestos and contamination.
    - Digging and excavation on the landfill cap will be regulated by the post closure care plan and the Ohio solid waste regulations.
    - Due to not meeting the industrial/commercial standard, exposure monitoring for the full-time facility employee must be conducted to ensure and document that exposure at the AOC is not above the established exposure limit set for the Security Guard/Maintenance worker of one (1) hour/day for 250 days/year for 25 years.
- Inspection of warning signs on gates and fencing.
- Inspection of RQL fencing and gates.

LUC deficiencies or inconsistent land uses that are identified must be reported and identified on the inspection form/report and must also be reported to the Army National Guard (ARNG)/Ohio Army National Guard (OHARNG).

Review of LUCs – Management/Effectiveness/Corrective Action

Activities and Land Use:

a.) This AOC is to be managed as Restricted Access and is restricted from residential land use. Has residential use occurred? Have other land uses or land use changes occurred?

b.) What activities have occurred at RQL since the last inspection? Has any maintenance been performed at the AOC?

c.) Are activities at RQL being conducted in compliance with established digging restrictions and established exposure limits (exposure for full-time employees who access RQL must be tracked)?

d.) Are the warning signs in place and functional? Please note condition and any deficiencies.

e.) Is the RQL fencing and gates intact and in good condition? Please note condition and any deficiencies.

Inspections and Reporting:

Inspections are required on an annual basis. Periodic monitoring inspections may be conducted as needed. Are annual inspections being conducted as required? Have any additional inspections been completed?

An Annual Report is required. Has the annual report been completed and submitted to the Ohio EPA?

Training/Inbriefs (as applicable to RQL):
Are RQL LUC training and/or inbriefs (for those who need to access RQL) being conducted as applicable? Describe the training (content/who attended/who provided/documentation of training).

If training was not provided, explain why and what corrective actions were initiated.

Is access to RQL for full-time employees of the facility being logged in order to track exposure? Please review access logs to ensure exposure is within the established exposure limits.

LUC Violations (if any):
Description of any observed/noted LUC violation(s) as identified:

Date of Notification of LUC violations (if applicable) to ARNG/OHARNG:

Description of any corrective actions taken to remedy observed LUC violations or recommended corrective actions:

Additional Notes/Comments:

Original Inspection Completed by:

Signature:

Printed Name:
Title:
Organization:
Date:

Appendix A-4. RVAAP-01 Ramsdell Quarry Landfill

Land Use Control Brief for Contractors Personnel

RVAAP-01 Ramsdell Quarry Landfill (RQL) – Land Use Control (LUC) Brief for Contractors/Personnel

The Army National Guard (ARNG)/Ohio Army National Guard (OHARNG) are required to conduct Long Term Monitoring (LTM)/LUC monitoring at RVAAP-01 RQL at Camp Ravenna/former Ravenna Army Ammunition Plant (RVAAP). LUCs include any type of physical, legal, or administrative mechanisms that restrict use of or limit access to real property to prevent or reduce risks to human health and the environment. Established LUCs are set forth in the *Final Remedial Design for Soil and Dry Sediment at the RVAAP-01 Ramsdell Quarry Landfill*, dated 9 April 2014, and formalized in Appendix A-2 of the Property Management Plan (PMP).

The RQL Area of Concern (AOC) consists of approximately 14 acres and was initially a stone quarry that operated until 1941. During operations, the quarry was excavated 30 to 40 feet below existing grade. The excavated sandstone and quartzite pebble conglomerate was used for road and construction ballast. From 1946 to the 1950s, the bottom of the quarry was used to burn explosives from Load Line 1. Between 1941 and 1989, the western and southern sections of the abandoned quarry were used for landfill operations. No information is available regarding landfill disposal activities from 1941 to 1976, and no information is available on other activities at the quarry from the 1950s to 1976. Only nonhazardous solid waste was deposited in RQL from 1976 until it was closed in 1989. In 1978, a portion of the abandoned quarry was permitted as a sanitary landfill by the State of Ohio. The sanitary landfill was closed in 1990 under State of Ohio solid waste regulations. A clay cap was placed on the former permitted landfill area covering approximately four (4) acres of the AOC. RQL is to be managed as Restricted Access due to residual asbestos and contamination and the closed landfill at the AOC.

The following LUCs have been developed for RQL considering specific parameters established for Restricted Access and must be adhered to:

- All activities must be in compliance with established digging restrictions and established exposure limits (Security Guard/Maintenance Worker - one (1) hour/day for 250 days/year for 25 years).
    - All digging or excavation within the quarry bottom is prohibited due to residual asbestos and contamination.
    - Digging and excavation on the landfill cap will be regulated by the post closure care plan and the State of Ohio solid waste regulations.
    - Due to not meeting the industrial/commercial standard, exposure monitoring for the full-time facility employee must be conducted to ensure and document that exposure at the AOC is not above the established exposure limit set for the Security Guard/Maintenance worker of one (1) hour/day for 250 days/year for 25 years.
- Permanent warning signs will be installed and maintained around RQL on the gates and on the chain link and high tensile wire fence at 300 feet centers to warn of the asbestos hazard in the quarry bottom. The signs will meet the requirements of OAC 3745-20-07 (B)(1)(b).
- As no soil disturbing activities are allowed within the quarry bottom, OSHA asbestos awareness training set forth in 29 CFR 1926.1101(k)(9)(vii) is not required. Any personnel entering the quarry bottom will be briefed of the asbestos hazards.
- Periodic monitoring of LUCs, in the form of site inspections, is required to be conducted by the ARNG/OHARNG to confirm that the LUCs remain effective and still meet LUC objectives for continued remedy protectiveness. Site inspections are required to be conducted on an annual basis and inspections of the solid waste landfill are conducted in accordance with State of Ohio solid waste regulations and the Ohio Environmental Protection Agency (Ohio EPA) Director's Final Findings and Orders (Ohio EPA 2004). The required annual inspection is to be submitted to the Ohio EPA for review and approval.

If a LUC violation is identified, please contact Range Control at (614)336-6041 to report.

I have been briefed and understand the requirements and LUCs/restrictions at Ramsdell Quarry Landfill. I will comply with all requirements. I will complete the access log for RQL when obtaining the key and accessing the AOC.

Name	Company	Date

Appendix A-5. Sign In-Out Sheet for

RVAAP-01 Ramsdell Quarry Landfill

Sign In/Out Sheet for Ramsdell Quarry Landfill – Please sign in and out when entering and exiting the Ramsdell Quarry Landfill. Please also note what activities were performed and what areas of the AOC were accessed.

Name/Company	**Date**	**Time In**	**Time Out**	**Description of Activities Performed (i.e., mowing, gw sampling, etc)**	**Areas Accessed (please choose and check)**
					□ Quarry bottom □ Groundwater monitoring wells □ Landfill cap
					□ Quarry bottom □ Groundwater monitoring wells □ Landfill cap
					□ Quarry bottom □ Groundwater monitoring wells □ Landfill cap
					□ Quarry bottom □ Groundwater monitoring wells □ Landfill cap
					□ Quarry bottom □ Groundwater monitoring wells □ Landfill cap
					□ Quarry bottom □ Groundwater monitoring wells □ Landfill cap
					□ Quarry bottom □ Groundwater monitoring wells □ Landfill cap
					□ Quarry bottom □ Groundwater monitoring wells □ Landfill cap
					□ Quarry bottom □ Groundwater monitoring wells □ Landfill cap
					□ Quarry bottom □ Groundwater monitoring wells □ Landfill cap

APPENDIX A-13

RVAAP-13 Building 1200-Dilution\Settling Pond

Appendix A-13: Building 1200 – (RVAAP-13) – No Further Action (NFA) STATUS for Soil, Sediment, and Surface Water

A.13.1 Background

The Building 1200 Area of Concern (AOC) was designated as the Ammunition Sectioning Area. From 1941 to 1971, three buildings served as a quality assurance (QA) inspection station that encompassed disassembly of production line munitions items, including explosive melt-pour operations. The primary operations building was Building 1200, which was a 30 by 20 ft combined reinforced concrete and transite panel frame structure. The steam melt-out process generated explosives-contaminated wastewater (pink water), which discharged from the building via a pipe, through a crushed slag gravel bed, and into a ditch connected to a 0.5-acre, unlined settling pond (located approximately 415 ft northeast of Building 1200). The depth of the settling pond is less than 3 ft. Overflow from the settling pond discharged directly to the ground surface southeast of the pond; there is no documented evidence of a discharge drainage ditch exiting the settling pond and flowing to a surface water body.

Building demolition activities took place between November 2004 and August 2005, and no buildings or structures remain at the AOC. The remaining surface features include the access road, drainage ditch from the former operations area to the former settling pond, and the former settling pond and associated discharge area.

A.13.2 Publications

The following publications can be located on <www.RVAAP.org> or in established RVAAP information repositories:

- Final Remedial Design for Soil, Sediment, and Surface Water at RVAAP-13 Building 1200 and RVAAP-48 Anchor Test Area, August 2014.
- Final Record of Decision for Soil, Sediment, and Surface Water at RVAAP-13 Building 1200, March 2014.
- Final Proposed Plan for Soil, Sediment and Surface Water at RVAAP-13 Building 1200, April 2013.
- Final Remedial Investigation/Feasibility Study Report for Soil, Sediment, and Surface Water at RVAAP-13 Building 1200, March 2012.
- Final PBA 2008 Supplemental Investigation Sampling and Analysis Plan Addendum No. 1 at Ravenna Army Ammunition Plant, December 2009.
- Final Work Plan Performance-Based Acquisition for Environmental Investigation and Remediation MEC Avoidance/Removal Services, September 2009.
- Final Project Management Plan for the 2008 Performance-Based Acquisition of Environmental Investigation and Remediation, September 2008.

- Final Quality Assurance Surveillance Plan for the 2008 Performance-Based Acquisition of Environmental Investigation and Remediation at Ravenna Army Ammunition Plant, September 2008.
- Final Characterization of 14 AOCs at Ravenna Army Ammunition Plant, March 2007.
- Final Sampling and Analysis Plan Addendum for the Characterization of 14 RVAAP AOCs at RVAAP, October 2004.
- Phase I Remedial Investigation Report for High Priority Areas of Concern at the Ravenna Army Ammunition Plant, Ravenna, Ohio, February 1998.
- Final Public Meeting Briefing Phase I Remedial Investigation of High Priority Areas of Concern at the Ravenna Army Ammunition Plant, September 1997.
- Draft Investigation-Derived Waste Characterization and Disposal Plan for the Phase I Remedial Investigation of High Priority Areas of Concern at the Ravenna Army Ammunition Plant, December 1996.
- Final Phase I Remedial Investigation Site Safety and Health Plan Addendum for High Priority Areas of Concern for the Ravenna Army Ammunition Plant, July 1996.
- Final Phase I Remedial Investigation Sampling and Analysis Plan Addendum for High Areas of Concern for the Ravenna Army Ammunition Plant, July 1996.
- Final Quality Control Plan for the Phase I Remedial Investigation for High Areas of Concern at RVAAP, June 1996.

A.13.3 Site Location and Description

The Building 1200 AOC is a former operational facility designated as RVAAP-13. The AOC is approximately 7.7 acres and is situated in the eastern portion of Camp Ravenna. Building demolition activities took place between November 2004 and August 2005, and no buildings or structures remain at the AOC. The remaining surface features include the access road, drainage ditch from the former operations area to the former settling pond, and the former settling pond and associated discharge area.

The topography at the Building 1200 AOC gently slopes radially from a high point just southwest of the former operations buildings. Ground elevations at the AOC range from 990 to 1004 ft above mean sea level (amsl). Intermittent surface water flows in the drainage ditch from the former operations area east to the former settling pond during precipitation events and periods of snow melt. The ditch tends to hold water for extended periods of time due to the low permeability of soil. Surface water discharge from the former settling pond occurs via an outlet channel to the southeast. Discharge flow is diffuse and enters into a heavily wooded area to the south of the pond. The nearest defined surface water conveyance (large ditch line or tributary flowing southwest to Sand Creek) that receives surface water flow lies approximately 1,000 ft to the southeast of the settling pond discharge area.

The Building 1200 AOC is on a local bedrock high. The AOC is underlain by a thin unconsolidated interval generally less than 3 ft thick. The underlying bedrock formation observed at the AOC is the Pennsylvanian age Pottsville Formation, Sharon Sandstone Member. The sandstone unit of the Sharon member (informally referred to as the Sharon Conglomerate) is a highly porous, loosely

cemented, permeable, cross-bedded, frequently fractured and weathered orthoquartzite sandstone, which is locally conglomeritic. The Sharon Conglomerate exhibits locally occurring thin shale lenses in the upper portion of the unit. Upper members of the Pottsville Formation are not present at the AOC.

A.13.4 Land Use and Activities

The AOC will be used for Military Training. The selected and implemented remedy for soil, sediment, and surface water allows for Unrestricted (Residential) Land Use, which also allows for Military Training Land Use.

A.13.5 Remedy Objectives

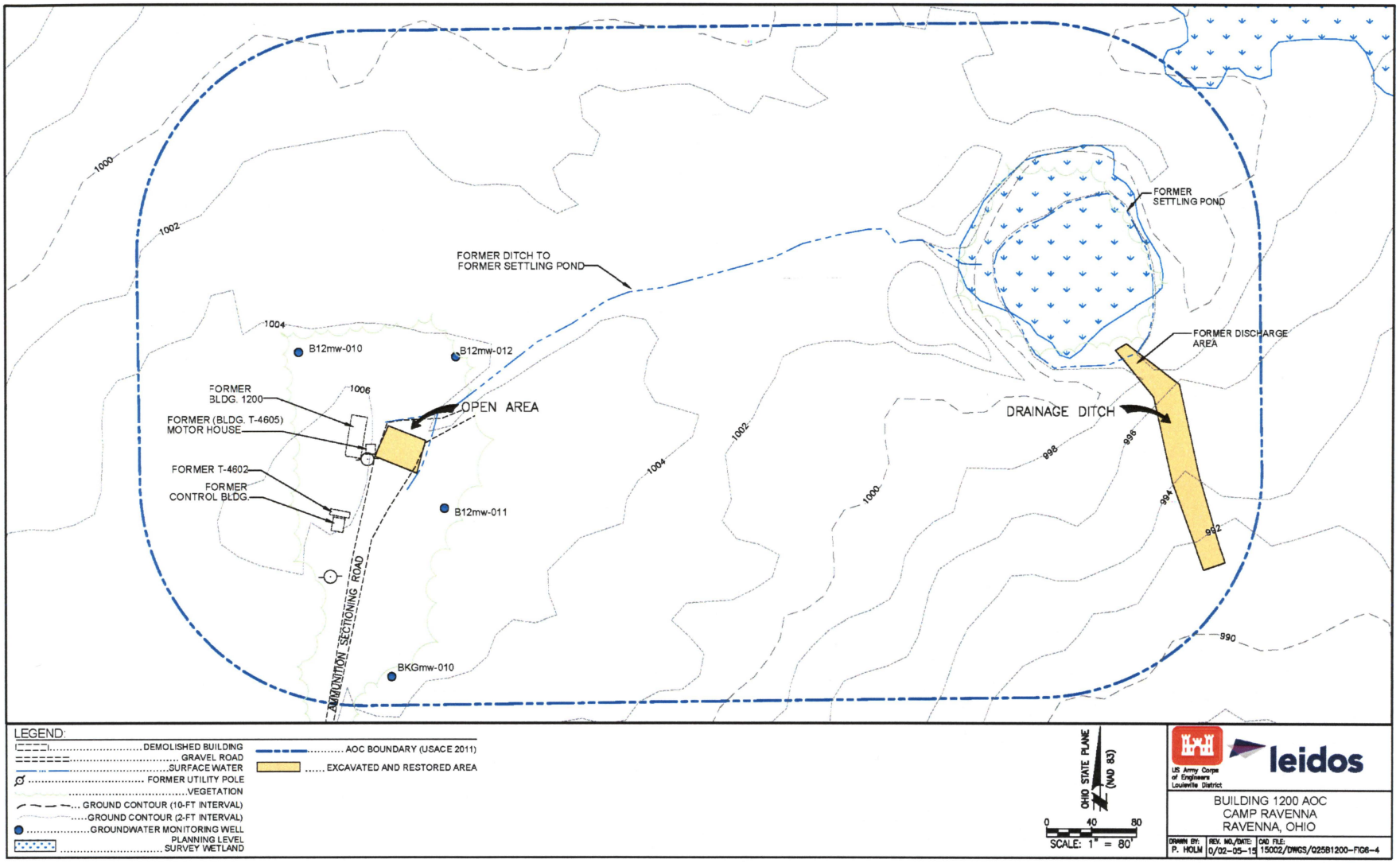
The *Record of Decision for Soil, Sediment, and Surface Water at RVAAP-13 Building 1200* (USACE 2014) documented that no further action (NFA) was required for sediment and surface water at the AOC. Manganese in soil was identified as a chemical of concern (COC) requiring remediation to attain Unrestricted (Residential) Land Use. Remedial activities were conducted in December 2014 and January 2015 and were summarized in the *Remedial Action Report for Soil, Sediment, and Surface Water at RVAAP-13 Building 1200* (USACE 2015). A total of 376 tons of contaminated soil was excavated from two contaminated areas within the AOC and transported and disposed at a local landfill. Confirmation sampling results and concurrence from the Ohio Environmental Protection Agency (EPA) concluded that the AOC met the criteria for Unrestricted (Residential) Land Use after implementation of the remedial action.

A.13.6 Land Use Controls

Land use controls (LUCs) are not required for soil, sediment, and surface water at the Building 1200 AOC. The remedial action achieved the remedial action objective (RAO) for manganese in soil to attain Unrestricted (Residential) Land Use, and NFA was required for sediment and surface water. Other media (i.e., groundwater) will be addressed as part of future actions.

A.13.7 Monitoring and Reporting

Five-year reviews are not required for soil, sediment, and surface water at the Building 1200 AOC, which is compliant with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121(c).



1 **Figure A.13-1. Features of the Building 1200 AOC**

APPENDIX A-48

RVAAP-48 Anchor Test Area

Appendix A-48: Anchor Test Area – (RVAAP-48) – No Further Action (NFA) STATUS for Soil, Sediment, and Surface Water

A.48.1 Background

Although operational information is relatively limited about this former research and development area used by the Firestone Tire and Rubber Company Defense Research Division, it is believed that Anchor Test Area was used for testing explosives-driven soil anchoring devices. These devices typically consisted of metal rods driven into the ground and attached via a cable to stabilize structures or anchor them to the ground. The dates this Area of Concern (AOC) was used are unknown; however, a 1961 drawing shows the final design for the AOC; therefore, it is likely it was not active until after the early 1960s. Aerial photographs from 1966 confirm the construction of AOC features, but it is unknown whether Anchor Test Area was active at the time of the photographs.

A.48.2 Publications

The following publications can be located on <www.RVAAP.org> or in established Ravenna Army Ammunition Plant (RVAAP) information repositories:

- Final Remedial Action Report for Soil, Sediment, and Surface Water at RVAAP-48 Anchor Test Area, April 2015.
- Final Remedial Design for Soil, Sediment, and Surface Water at RVAAP-13 Building 1200 and RVAAP-48 Anchor Test Area, August 2014.
- Final Record of Decision for Soil, Sediment, and Surface Water at RVAAP-48 Anchor Test Area, March 2014.
- Final Proposed Plan for Soil, Sediment, and Surface Water at RVAAP-48 Anchor Test Area, May 2013.
- Final Remedial Investigation/Feasibility Study Report for Soil, Sediment, and Surface Water at the RVAAP-48 Anchor Test Area, Ravenna Army Ammunition Plant, Ravenna, Ohio, January 2012.
- Final PBA 2008 Supplemental Investigation Sampling and Analysis Plan Addendum No. 1 at Ravenna Army Ammunition Plant, December 2009.
- Final Work Plan Performance-Based Acquisition for Environmental Investigation and Remediation MEC Avoidance/Removal Services, September 2009.
- Final Project Management Plan for the 2008 Performance-Based Acquisition of Environmental Investigation and Remediation, December 2008.
- Final Quality Assurance Surveillance Plan for the 2008 Performance-Based Acquisition of Environmental Investigation and Remediation at Ravenna Army Ammunition Plant, September 2008.
- Final Characterization of 14 AOCs at Ravenna Army Ammunition Plant, March 2007.
- Final Sampling and Analysis Plan Addendum for the Characterization of 14 RVAAP AOCs, October 2004.

- Hazardous and Medical Waste Study No. 37-EF-5360-99 Relative Risk Site Evaluation for Newly Added Sites, October 1998.

A.48.3 Site Location and Description

Anchor Test Area is approximately 0.5 acres and is located approximately 50-75 ft west of Wilcox-Wayland Road and 2,500 ft south of Newton Falls Road (Figures 2-2 and 2-3). The distinct surface features of the AOC are the former earthen blast wall (dirt mounds) and a nearby 12 by 36 ft sandpit. The anchor tests were likely performed within the sandpit. The adjacent dirt mounds functioned as blast walls. One mound is approximately 8-10 ft high while the others are only 1-2 ft high. The dirt mounds are still observable, although the mounds are overgrown with vegetation and small trees. The sandpit is no longer visually distinct due to vegetative growth. Metal debris is visible in the area, and a section of concrete culvert can be seen in one of the dirt mounds.

The immediate vicinity is heavily forested with the exception of the large wetland approximately 500 ft to the south. No perennial surface water or drainage conveyance features are present at the AOC. Sediment and surface water are not considered media of concern at Anchor Test Area. Surface water occurs only intermittently as overland storm water runoff associated with heavy rainfall events and generally flows towards the wetland located 500 ft to the south. The wetland is drained to the south by an unnamed stream which enters the west branch of the Mahoning River.

Anchor Test Area is located on the southern edge of a small topographic high isolated from other former operational areas at an elevation of approximately 1004 ft above mean sea level (amsl). From this topographic high, the elevation gently slopes downward towards the south and west to approximately 998 ft amsl.

A.48.4 Land Use and Activities

The AOC will be used for Military Training. The selected and implemented remedy for soil allows for Unrestricted (Residential) Land Use, which also allows for Military Training Land Use.

A.48.5 Remedy Objectives

The *Record of Decision for Soil, Sediment, and Surface Water at RVAAP-48 Anchor Test Area* (USACE 2014) documented that sediment and surface water are not present at the AOC. Arsenic in soil was identified as a chemical of concern (COC) requiring remediation to attain Unrestricted (Residential) Land Use. Remedial activities were conducted in November 2014 and were summarized in the *Remedial Action Report for Soil, Sediment, and Surface Water at RVAAP-48 Anchor Test Area* (USACE 2015). A total of 45 tons of contaminated soil was excavated from within the AOC and transported and disposed at a local landfill. Confirmation sampling results and concurrence from the Ohio Environmental Protection Agency (Ohio EPA) concluded that the AOC met the criteria for Unrestricted (Residential) Land Use after implementing the remedial action.

A.48.6 Land Use Controls

Land use controls (LUCs) are not required for soil, sediment, or surface water. The remedial action achieved the remedial action objective (RAO) for arsenic in soil to attain Unrestricted (Residential) Land Use. Sediment and surface water are not present at Anchor Test Area. Other media (i.e., groundwater) will be addressed as part of future actions.

A.48.7 Monitoring and Reporting

Five-year reviews are not required for soil, sediment, and surface water at Anchor Test Area, which is compliant with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121(c).

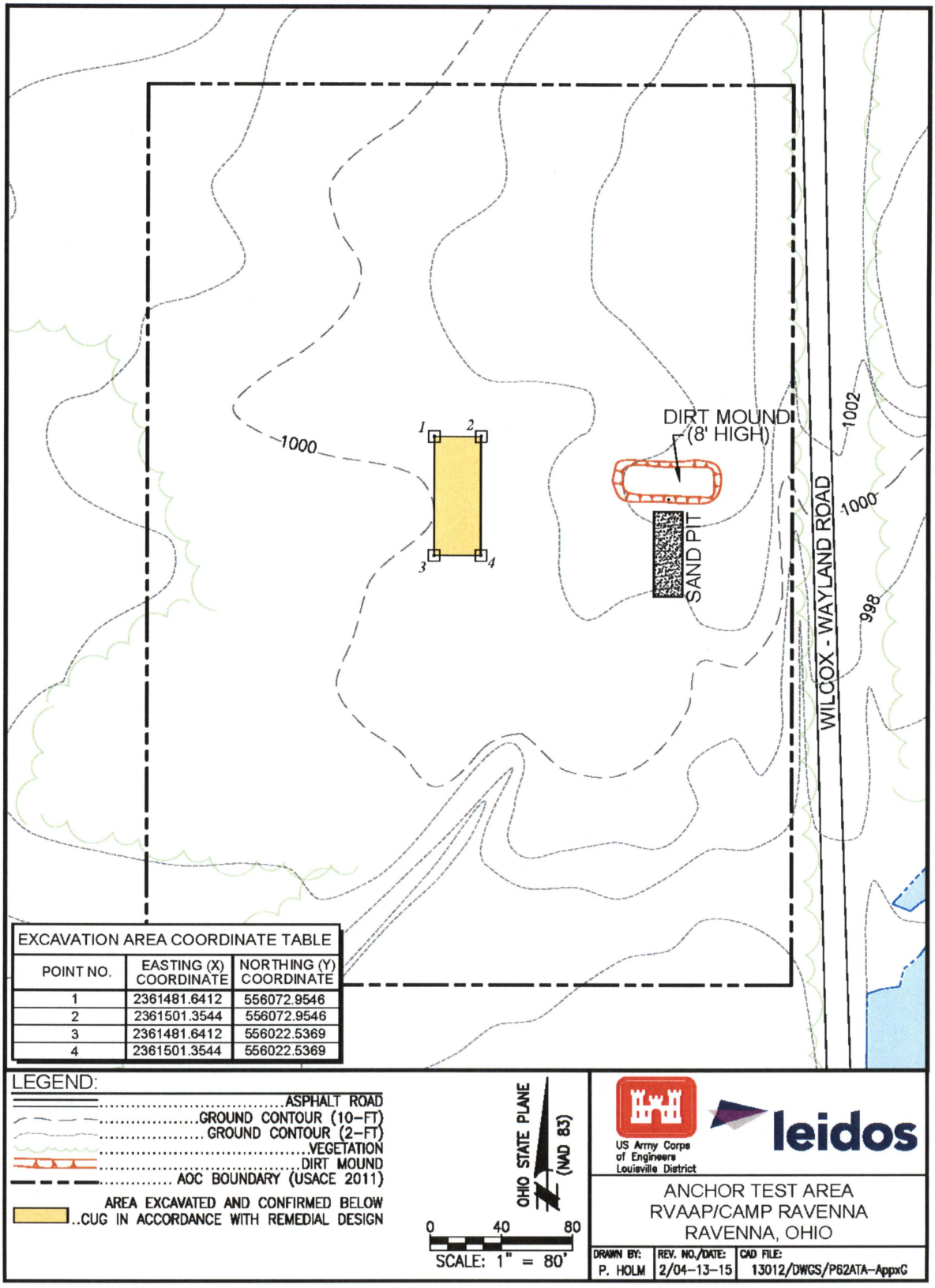


Figure A.48-1. Features of Anchor Test Area

APPENDIX B
AOC/MRS SITE INSPECTION FORM TEMPLATE

Camp Ravenna Joint Military Training Center (Camp Ravenna) /
Ravenna Army Ammunition Plant (RVAAP)
LUC AOC/MRS Inspection Form Template

In accordance with the Camp Ravenna Joint Military Training Center/Ravenna Army Ammunition Plant Property Management Plan (PMP) dated _____ and Appendix A-___ an inspection of AOC /MRS_____ was conducted by _____ [*indicate Army or its approved representative*] on _____ *date*.

Description of any observed Land Use Control (LUC) violation(s)

_____
_____
_____
_____

Date(s) of Notifications:_____

Description of any corrective actions taken to remedy observed LUC violation(s)

_____
_____
_____
_____

Status of LUC Procedures

- **AOC/MRS Map** – Is the AOC/MRS map current with respect to AOC/MRS boundaries, land activities and prescribed LUCs?

_____
_____
_____
_____

- **Fence, Sign and Gate Conditions –** Are the installation perimeter fence and gates being maintained and in good repair? Are the required Seibert stakes and/or signage in place and functional? If not, when and what corrective actions will be undertaken?

_____
_____
_____
_____

- **Training –** Was the LUC Awareness training consistently conducted over the past year? If not, why not? What corrective actions were initiated? Who provided training?

_____
_____
_____
_____

- **Required Monitoring –** Did the Army or the designated representative conduct required monitoring over the past year? If not, why not. Provide dates of inspection.

_____
_____
_____
_____

Date: _____

Name/Title: _____

Organization: _____

Signature: _____