

**Final  
No Further Action Record of Decision for  
RVAAP-019-R-01 Landfill North of Winklepeck  
Munitions Response Site  
Version 2.0**

**Former Ravenna Army Ammunition Plant  
Portage and Trumbull Counties, Ohio**

**Contract No. W912DR-15-D-0016  
Delivery Order No. 0001**

**Prepared for:**



**US Army Corps  
of Engineers®**

**U.S. Army Corps of Engineers  
Baltimore District  
2 Hopkins Plaza  
Baltimore, Maryland 21201**

**Prepared by:  
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**January 14, 2019**

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**REPORT DOCUMENTATION PAGE**

*Form Approved  
OMB No. 0704-0188*

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<b>13. SUPPLEMENTARY NOTES</b> None					
<b>14. ABSTRACT</b> The U.S. Department of the Army (U.S. Army) is presenting this No Further Action (NFA) Record of Decision to document the No Further Action determination for the former Ravenna Army Ammunition Plant, RVAAP-019-R-01 Landfill North of Winklepeck Munitions Response Site (MRS), in Portage and Trumbull Counties, Ohio. This NFA Record of Decision presents the U.S. Army's No Further Action determination, Ohio EPA Concurrence with the NFA decision, and the response from the public during the 30-day public comment period for the RVAAP-019-R-01 Landfill North of Winklepeck MRS. Investigations have found no munitions and explosives of concern or concentrated areas of munitions debris, and no potential source of munitions constituents exists at the MRS. Therefore, there is no source material or impacted environmental media resulting from historical U.S. munitions-related activities at the MRS.					
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John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Craig W. Butler, Director

OCT 29 2018

Mr. David Connolly  
Army National Guard Directorate  
Environmental Programs Division  
ARNG-ILE-CR  
111 South George Mason Drive  
Arlington, VA 22204

Re: US Army Ravenna Ammunition Plt RVAAP  
Remediation Response  
Approval  
Remedial Response  
Portage County  
267000859202

Subject: Concurrence with the "Final No Further Action Record of Decision, RVAAP-019-R-01 Landfill North of Winklepeck Munitions Response Site Version 1.0" Munitions Response Services at the Former Ravenna Army Ammunition Plant, Portage and Trumbull Counties, Ohio September 4, 2018 (Work Activity No. 267000859202)

Dear Mr. Connolly:

The Ohio Environmental Protection Agency (Ohio EPA), Northeast District Office (NEDO), Division of Environmental Response and Revitalization (DERR) has received and reviewed the *Final No Further Action Record of Decision, RVAAP-019-R-01 Landfill North of Winklepeck Munitions Response Site Version 1.0* document dated September 4, 2018. This document was received by Ohio EPA's NEDO on September 4, 2018. It was prepared by HydroGeoLogic, Inc. (HGL).

The Military Munitions Response Program (MMRP) remedial investigation for the Landfill North of Winklepeck munitions response site (MRS) investigated the potential presence of munitions and explosives of concern (MEC) within the defined portion of the MRS. To date, no MEC has been found at the MRS. Therefore, sampling for munitions constituents was not warranted. The chemicals of concern identified in surface soil and dry sediment during previous investigations will continue to be addressed under the Installation Restoration Program. As there are no further comments or potential issues to address for the MRS, Ohio EPA concurs with the remedy of No Further Action for the MRS.

If you have any questions concerning this letter, please contact Nicholas Roope at (330) 963-1235.

Sincerely,

Craig W. Butler  
Director

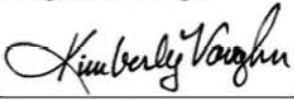
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cc: Nat Peters, USACE  
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## CONTRACTOR'S STATEMENT OF INDEPENDENT TECHNICAL REVIEW

HydroGeoLogic, Inc. has completed the *Final No Further Action Record of Decision for RVAAP-019-R-01 Landfill North of Winklepeck Munitions Response Site, Version 2.0*, at the Ravenna Army Ammunition Plant, Portage and Trumbull Counties, Ohio. Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of data quality objectives, technical assumptions; methods, procedures, and materials to be used; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets customer's needs consistent with law and existing United States Army Corps of Engineers policy.

Reviewed/Approved by:	<small>Digitally signed by Janardan J Patel DN: cn=Janardan J Patel, o=HGL, ou=ECD, email=jpatel@hgl.com, c=US Date: 2019.01.14 11:24:13 -0500</small> <u>Janardan J Patel</u> Janardan Patel, PMP Program Manager	Date: <u>1-14-19</u>
Prepared/Approved by:	 <u>Kimberly Vaughn</u> Kimberly Vaughn Project Manager	Date: <u>1-14-19</u>

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**January 14, 2019**

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ARNG – Army National Guard

COR – Contracting Officer’s Representative

IED – Installation and Environment Division

OHARNG – Ohio Army National Guard

RVAAP – Former Ravenna Army Ammunition Plant

USACE – United States Army Corps of Engineers

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Appendix A Notice of Availability of the Proposed Plan

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## ACRONYMS AND ABBREVIATIONS

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amsl	above mean sea level
AOC	Area of Concern
Camp Ravenna	Camp Ravenna Joint Military Training Center
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cm/s	centimeter per second
CSM	Conceptual Site Model
DA	U.S. Department of the Army
DERP	Defense Environmental Restoration Program
DFFO	Director's Final Findings and Orders
DMM	discarded military munitions
DoD	Department of Defense
e <sup>2</sup> M	Engineering-Environmental Management, Inc.
ERA	Ecological Risk Assessment
GOCO	U.S. Government-owned and contractor-operated
HA	Hazard Assessment
HGL	HydroGeoLogic, Inc.
HHRA	Human Health Risk Assessment
I&E	Installation and Environment
IRP	Installation Restoration Program
MC	munitions constituents
MD	munitions debris
MEC	munitions and explosives of concern
mm	millimeter
MMRP	Military Munitions Response Program
MPPEH	Material Potentially Presenting an Explosive Hazard
MRS	munitions response site
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFA	No Further Action
ODNR	Ohio Department of Natural Resources
OHARNG	Ohio Army National Guard
Ohio EPA	Ohio Environmental Protection Agency
PP	Proposed Plan
RAB	Restoration Advisory Board
RI	Remedial Investigation
ROD	Record of Decision
RVAAP	Ravenna Army Ammunition Plan
SARA	Superfund Amendments and Reauthorization Act
SI	Site Inspection

## ACRONYMS AND ABBREVIATIONS (continued)

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TESL	Threatened and Endangered Species List
TNT	2,4,6-trinitrotoluene
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USP&FO	U.S. Property and Fiscal Officer
UXO	unexploded ordnance

## **PART I: DECLARATION**

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### **A. SITE NAME AND LOCATION**

The Army developed this no Further Action (NFA) Record of Decision (ROD) at RVAAP-019-R-01 Landfill North of Winklepeck Munitions Response Site (MRS). The Landfill North of Winklepeck MRS is located in the central portion of Camp Ravenna (**Figures 1 and 2**).

The Ravenna Army Ammunition Plant (RVAAP) is now known as Camp Ravenna Joint Military Training Center (Camp Ravenna). The 21,683 acre federally owned installation is located in Portage and Trumbull Counties, Ohio approximately 3 miles east-northeast of the City of Ravenna (**Figure 1**). Administrative accountability for Camp Ravenna was transferred to the U.S. Property and Fiscal Officer (USP&FO) for Ohio (the property owner) in multiple transfers, the last completed in September 2013. The facility is licensed to the Ohio Army National Guard (OHARNG) for use as a military training facility (Federal Facility ID No. OH213820736).

To maintain a distinction between historical operations and current activities, the term “RVAAP” will be used for historical discussions and “Camp Ravenna” will be used when referring to the current facility activities.

### **B. STATEMENT OF BASIS AND PURPOSE**

The ARNG is the lead federal agency for environmental response actions at Camp Ravenna. The Army, in consultation with the Ohio Environmental Protection Agency (Ohio EPA), determined that NFA is the selected remedy for the Landfill North of Winklepeck MRS at Camp Ravenna. The NFA determination meets the requirements of the *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) of 1980, as amended by the *Superfund Amendments and Reauthorization Act (SARA)* of 1986 and the *National Oil and Hazardous Substances Pollution Contingency Plan (NCP)*. The Army’s decision is based on information contained in the Administrative Record file for the Landfill North of Winklepeck MRS.

The Landfill North of Winklepeck slightly overlaps with the RVAAP-19 Area Of Concern (AOC) being investigated under the Installation Restoration Program (IRP), pursuant to CERCLA. Investigation of the IRP AOC RVAAP 19 will address any potential contamination related to past industrial activities and sources (non-munitions related contamination or sources). Solid waste identified at the site will be managed under the Solid Waste Management Plan for Camp Ravenna (currently preliminary draft).

The Ohio EPA, the supporting state regulatory agency, reviewed and concurred with the *Final No Further Action Proposed Plan for RVAAP-019-R-01 Landfill North of Winklepeck Munitions Response Site* (HydroGeoLogic, Inc. [HGL], 2017) and their concurrence letter is included at the beginning of this ROD. The NFA Proposed Plan (PP) presented the Army’s preferred remedy for addressing the Landfill North of Winklepeck MRS and invited public involvement during the comment period (November 3 through December 8, 2017) and public meeting (November 8, 2017). No Department of Defense (DoD) military munitions (i.e., unexploded ordnance [UXO], discarded military munitions [DMM] or munitions constituents [MC]) originating from historical activities associated with the Landfill North of Winklepeck MRS have been encountered throughout the CERCLA process. The NFA determination under the CERCLA at the Landfill North of Winklepeck MRS satisfies the requirements of the *Director’s Final Findings and Orders* (DFFO) (Ohio EPA, 2004), specifically by documenting the Ohio EPA’s concurrence to the closeout of the Military Munitions Response Program (MMRP) investigation conducted for this MRS under Section XII, paragraph 26.

### **C. DESCRIPTION OF THE SELECTED REMEDY**

There was no evidence of DoD military munitions encountered at the MRS during the Remedial Investigation (RI) field work. Additionally, MC-related contamination was not detected at the MRS during

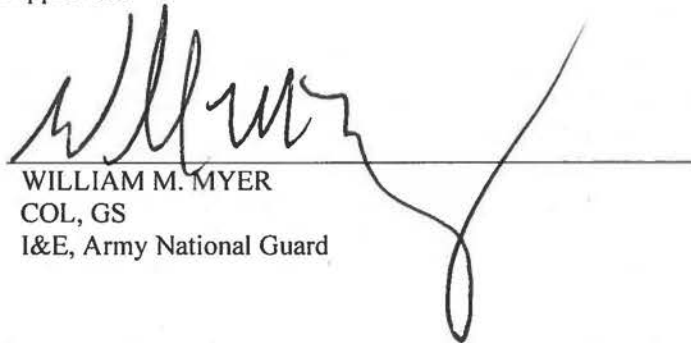
the RI field work. Therefore, NFA is the selected remedy for the Landfill North of Winklepeck MRS under the MMRP and pursuant to CERCLA.

**D. STATUTORY DETERMINATION**

The results of the RI fieldwork for the Landfill North of Winklepeck MRS support the determination that there is no risk associated with exposure to DoD military munitions, or MC-related contamination at the MRS. The Army has determined that NFA is acceptable for the Landfill North of Winklepeck MRS because there is no risk associated with the presence of DoD military munitions or MC-related contamination. The NFA is protective of human health and the environment, and meets the statutory requirements for cleanup standards established in Section 121 of CERCLA. Because there are no risks to human health or the environment associated with DoD military munitions, or MC-related contamination at the MRS, five-year reviews are not required. No other remedial action is necessary to ensure protection of human health and the environment.

**E. AUTHORIZING SIGNATURE**

Approved:



WILLIAM M. MYER  
COL, GS  
I&E, Army National Guard



Date

## **PART II: DECISION SUMMARY**

---

### **A. SITE NAME, LOCATION, AND DESCRIPTION**

The RVAAP, now known as the Camp Ravenna Joint Military Training Center (Camp Ravenna), is located in northeastern Ohio within Portage and Trumbull Counties and is approximately 3 miles east-northeast of the city of Ravenna. The federally owned facility, approximately 11 miles long and 3.5 miles wide, is bounded by a Norfolk Southern railroad line to the north; State Route 5, the Michael J. Kirwan Reservoir, and a CSX railroad line to the south; State Route 534 to the east; and Garret, McCormick, and Berry Roads to the west. The facility is surrounded by the communities of Windham, Garrettsville, Newton Falls, Charlestown, and Wayland. (**Figure 1**).

Administrative accountability of the 21,683-acre facility has been transferred to the USP&FO for Ohio and subsequently licensed to the OHARNG for use as a training site, Camp Ravenna. The restoration program for the facility involves the remediation of areas affected by the activities of the RVAAP.

The Landfill North of Winklepeck MRS is a 2.3-acre area located in the north-central portion of Camp Ravenna as shown in **Figure 2**. The MRS acreage was revised based on the findings of the Site Inspection (SI) (See Section B.1). The MRS identified in the Historical Records Review and addressed in the SI was a 14.05-acre area overlapping IRP AOC RVAAP-19. The results of the SI supported the recommendation to reduce the MRS to the northern 2.3 acres immediately east of the landfill on top of a small bluff. **Figure 3** presents the current and previous MRS boundaries and location of IRP AOC RVAAP-19.

The Landfill North of Winklepeck MRS is being investigated under the MMRP, a similar program to the IRP. The MMRP was established under the Defense Environmental Restoration Program (DERP) to address DoD military munitions located on current and former defense sites. Sites that are eligible under the MMRP are non-operational ranges where military munitions are known or suspected to be present. The Landfill North of Winklepeck MRS was determined to be eligible under the MMRP.

### **B. SITE HISTORY AND ENFORCEMENT ACTIVITIES**

The RVAAP was constructed in 1940 and 1941 for assembly/loading and depot storage of ammunition. While serving as an ammunition plant, RVAAP was a U.S. Government-owned and contractor-operated (GOCO) industrial facility. The ammunition plant 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 (a mixture of TNT and Research Department Explosive) into large-caliber shells and bombs. 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. After cleaning, the “pink water” wastewater, which contained TNT and Composition B, was collected in concrete holding tanks, filtered, and pumped into unlined ditches for transport to earthen settling ponds. Load Lines 5 through 11 manufactured fuzes, primers, and boosters. From 1946 to 1949, Load Line 12 produced ammonium nitrate for explosives and fertilizers; subsequently, it was used as a weapons demilitarization facility.

In 1950, the facility was placed on standby status, and operations were limited to renovation, demilitarization, normal maintenance of equipment, and munitions storage. Production activities resumed from July 1954 to October 1957 and again from May 1968 to August 1972. Demilitarization and production activities were conducted at Load Lines 1, 2, 3, and 12. Demilitarization activities included disassembling munitions, melt out, and recovering explosives using hot water and steam processes. These activities continued through 1992.

In addition to production and demilitarization activities at the load lines, other activities at RVAAP included the burning, demolition, and testing of munitions. The locations used as burning and demolition grounds consisted of large, open areas and abandoned quarries. Other AOCs associated with the RVAAP include

landfills, an aircraft fuel tank testing area, and various industrial support and maintenance facilities (CB&I, 2015).

The Landfill North of Winklepeck operated from 1969 to 1976, accepting general refuse, explosive waste residue, and open burn waste including flares and booster cups from the nearby Winklepeck Burning Grounds. Details regarding the operational history of disposal activities at the Landfill North of Winklepeck MRS, however, are incomplete (Engineering-Environmental Management, Inc. [e<sup>2</sup>M], 2007). Based on the results of the 2007 *Final Military Munitions Response Program Historical Records Review* (Final Historical Records Review), the Army modified the boundary and acreage of the MRS.

There have been no CERCLA enforcement actions related to the Landfill North of Winklepeck MRS.

### C. COMMUNITY PARTICIPATION

Using the Camp Ravenna community relations program, the Army and the Ohio EPA have interacted with the public through news releases, public meetings, reading materials, and a website. Specific items of the community relations program include the following:

- **Restoration Advisory Board (RAB):** The Army established a RAB in 1996 to promote community involvement in U.S. DoD environmental cleanup activities and allow the public to review and discuss the progress with decision makers. Board meetings are generally held two to three times per year and are open to the public.
- **Camp Ravenna Community Relations Plan:** The *Final Community Relations Plan for the Ravenna Army Ammunition Plant Restoration Program in Portage and Trumbull Counties, Ohio* (USACE, 2017) was prepared to establish processes to keep the public informed of activities being conducted as part of the Camp Ravenna restoration program.
- **Camp Ravenna Website:** The Army established a website in 2004 dedicated to the RVAAP restoration program. The website provides information on the history of the RVAAP; areas where DoD military munitions may be present; areas of potential contamination; the cleanup program being implemented; current activities; and a schedule of upcoming events. This website is accessible to the public at [www.rvaap.org](http://www.rvaap.org).

In accordance with Section 117(a) of CERCLA, Section 300.430(f)(2) of the *National Oil and Hazardous Substances Pollution Contingency Plan* and the *Final U.S. Army Military Munitions Response Program Munitions Response, Remedial Investigation/Feasibility Study Guidance* (Army, 2009), the Army released the NFA PP for the Landfill North of Winklepeck MRS (HGL, 2017) to the public in November 2017. The NFA PP and other project-related documents were made available to the public at the Administrative Record maintained at Camp Ravenna and in the two Information Repositories at Reed Memorial Library in Ravenna, Ohio and Newton Falls Public Library in Newton Falls, Ohio. The notice of availability for the NFA PP was sent to the Tribune Chronicle and Record Courier as specified in the Community Relations Plan (USACE, 2017). The notice of availability initiated the 30-day public comment period beginning November 3, 2017 and ending December 8, 2017.

The Army held a public meeting on November 8, 2017 at the Charlestown Town Hall, 6368 Rock Spring Road, Ravenna, Ohio 44266, to present the NFA PP to the public. At this meeting, representatives of the Army provided information specific to the Landfill North of Winklepeck history, investigations, current site conditions, and proposed NFA. Army representatives were also available to answer questions about the results of the munitions response investigations conducted under the MMRP at the Landfill North of Winklepeck MRS. A memorandum summarizing the public meeting and a transcript of the public meeting are available to the public and has been included in the Administrative Record. Responses to the comments received at this meeting and during the public comment period are included in the Responsiveness Summary, which is Part III of this ROD.

The Army considered the input received on the NFA PP when determining that NFA for both DoD military munitions and MC-related contamination is appropriate for the Landfill North of Winklepeck MRS.

#### **D. SCOPE AND ROLE OF RESPONSE ACTION**

The overall goal of the munitions response conducted at Camp Ravenna was to address risks to human health and the environment posed by DoD military munitions that may be present and MC-related contamination. The munitions response that the Army conducted did not encounter DoD military munitions or evidence of their presence within the Landfill North of Winklepeck. Given there was no evidence that DoD military munitions were present there was no potential source of MC-related contamination. For this reason, the Army determined there is no source material or impacted environmental media associated with DoD military munitions at the Landfill North of Winklepeck MRS.

Although not anticipated, if additional hazards related to historical DoD use are identified at the Landfill North of Winklepeck MRS, they would be addressed under the appropriate program.

#### **E. SITE CHARACTERISTICS**

This section describes the physical characteristics, previous investigations, nature and extent of contamination, and conceptual site model (CSM) for the Landfill North of Winklepeck MRS.

##### **E.1 Physical Characteristics**

This section describes the physical characteristics such as topography, geology, hydrogeology, and ecological characteristics that contributed to identifying potential transport pathways, receptors, and exposure scenarios used to evaluate health and ecological risks.

###### ***E.1.1 Topography/Physiography***

Camp Ravenna is located within the Southern New York section of the Appalachian Plateaus physiographic province characterized by rolling hills, incised streams, and dendritic drainage patterns. Past glacial activity created bogs, lakes, and other wetland areas (e<sup>2</sup>M, 2008). The topography that characterizes the Landfill North of Winklepeck MRS slopes definitively toward the east from the top of the landfill that defines the top of the MRS to the unnamed stream which is the lowest point at the MRS. The greatest change in elevation at the MRS is approximately 18 feet from the highest point at the MRS (approximately 1,138 feet above mean sea level [amsl]) at the top of the hill to the lowest point (approximately 1,120 feet amsl) at the unnamed stream to the east (CB&I, 2015).

###### ***E.1.2 Soils and Geology***

Camp Ravenna is located atop Mississippian- and Pennsylvanian-age bedrock strata overlain by unconsolidated glacial deposits of varying thickness. The Landfill North of Winklepeck MRS is located over the Sharon Sandstone Member, ranging between approximately 910 and 940 feet amsl. Depth to bedrock ranges from just below ground surface to approximately 20 feet below ground surface (CB&I, 2015).

Surface soils at the MRS have been significantly reworked due to the historical use as a landfill and disposal area. The naturally occurring soil types consist of deep, moderately well drained Ellsworth silt loam with 6 to 12 percent slopes. Permeability in the subsurface soil and underlying glacial till is slow ( $4.2 \times 10^{-5}$  to  $1.4 \times 10^{-3}$  centimeters per second [cm/s]), resulting in fully saturated conditions in the winter and spring seasons (CB&I, 2015).

###### ***E.1.3 Hydrogeology***

Camp Ravenna is located within the Ohio River Basin with a major surface stream running adjacent to the western portion of the facility flowing to the Mahoning River before joining the Michael J. Kirwan Reservoir. After leaving the reservoir, the west branch joins the Mahoning River east of the facility. An

unnamed stream runs along the north-eastern boundary of the Landfill North of Winklepeck MRS. Groundwater sampling at IRP AOC RVAAP-19 indicates the direction of groundwater flow is to the southeast toward the unnamed tributary (CB&I, 2015).

#### ***E.1.4 Ecology***

Camp Ravenna is home to a range of habitats, vegetation types, and animal species. The Landfill North of Winklepeck MRS is a tree-dominated area described as the Oak Maple Tulip Tree Forest Community. Pondweeds, hornworts, and waterweed species characterize the swamp-like areas near the unnamed stream to the northeast. Historical use of the area as a landfill disposal area have influenced the vegetation throughout the MRS (CB&I, 2015).

The Camp Ravenna Integrated Natural Resources Management Plan and U.S. Fish and Wildlife Service (USFWS) Threatened and Endangered Species List (TESL) indicate that one federally-listed threatened species, the Northern Long-eared Bat, is known to reside within Camp Ravenna (OHARNG, 2014) (USFWS, 2018). In addition, the Ohio Department of Natural Resources (ODNR) has identified several state-listed threatened and endangered plant and animal species. Twelve state listed endangered species (1 mammal, 1 fish, 2 insects, 2 birds, and 6 plant species) and eight state listed threatened species (2 birds, 1 insect, 1 mammal, 4 plants species) are included on the Camp Ravenna Rare Species List (OHARNG, 2014). No confirmed sightings of these species within the Landfill North of Winklepeck MRS have been reported and no critical habitats are present within the MRS (CB&I, 2015).

### **E.2 Site Investigations**

#### ***E.2.1 Site Inspection (SI)***

In 2008, the Army completed a SI at Camp Ravenna that included the Landfill North of Winklepeck MRS. The Army conducted a visual survey for DoD military munitions on a meandering path along the hillside, creek bed, wooded area to the southeast, and downstream area of the MRS (**Figure 4**). No DoD military munitions were discovered; however, munitions debris (MD) recovered include a flare canister, a partially buried bomb casing fragment, and an empty 105millimeter (mm) projectile. Two areas of high subsurface anomaly density were identified along the length of the hillside adjacent to the landfill. The single composite soil sample collected where the flare canister was recovered did not contain explosives or propellants at concentrations greater than the preliminary remediation goals; however, lead, iron, and thallium levels exceeded Camp Ravenna background values. Locations of the soil sample and MD are presented on **Figure 4**.

All munitions-related scrap encountered during the SI were evaluated to determine whether they posed an explosive hazard and subsequently documented as safe. The Army did not encounter DoD military munitions, MD, or other materiel that would be considered material potentially presenting an explosive hazard (MPPEH) during the visual survey. The Army recommended in the Final SI Report that the MRS footprint be decreased from 14.05 acres to 2.3-acres in the northern portion of the MRS. The reduced footprint includes the area adjacent to and along the length of the former landfill and down the slope to an unnamed stream to the northeast. The new MRS boundary slightly overlaps with the IRP AOC RVAAP-19 to the south and includes the locations where the flare canister and suspected booster cups were discovered as shown on **Figure 4**. In addition, the Army recommended to further investigate the reduced MRS to determine whether DoD military munitions were present (e<sup>2</sup>M, 2008).

#### ***E.2.2 Remedial Investigation (RI)***

The Army conducted an RI in 2015 at the Landfill North of Winklepeck MRS to identify and bound areas where DoD military munitions were potentially present, and characterize the nature and extent of MC-related contamination potentially present within the MRS. Historical information and the SI results were incorporated when planning the RI field effort. The Army conducted an instrument-assisted visual survey of 1.6 acres that covered 100 percent of accessible areas. The remaining 0.7 acres along the eastern



slope of the landfill was determined to be inaccessible due to obstacles such as deadfall, standing water, and thick vegetation, which limited the extent of the visual survey. The RI field activity results (**Figure 5**) are as follows:

- The sloped areas of the southwestern portion of the MRS were littered with metal debris (55-gallon drum, rusted pails/cans). Subsurface anomalies also were detected in these areas. The Army assumed that any buried items would be consistent with the surface debris and determined, therefore, that intrusive investigations for military munitions were unwarranted.
- There were no DoD military munitions encountered during the instrument-aided visual survey. Therefore, a geophysical investigation and sampling for MC-related contamination were not warranted.

Based on the results of the RI fieldwork, the Army concluded that DoD military munitions were not present and the nature and extent of MC-related contamination at the Landfill North of Winklepeck MRS (**Figure 5**) had been adequately characterized. Because DoD military munitions were not encountered, potential sources for a release of MC-related contamination were not identified within the MRS. The MRS was recommended for NFA for DoD military munitions and MC-related contamination (CB&I, 2015).

### **E.3 Nature and Extent of Contamination**

Data gathered by the Army during the SI and subsequent RI of the Landfill North of Winklepeck MRS effectively characterized the nature and extent of DoD military munitions and MC-related contamination at the MRS. Based on the information presented in Part II, Sections A through E, it can be concluded that no further action at the Landfill North of Winklepeck MRS is necessary.

As outlined in the RI Report, there was no evidence that DoD military munitions or concentrated areas of MD were present at the Landfill North of Winklepeck MRS. The RI determined there are no explosive hazards and no sources for a release of MC-related contamination. Therefore, neither DoD military munitions nor MC-related contamination posed a risk at the Landfill North of Winklepeck MRS (CB&I, 2015).

### **E.4 Conceptual Site Model (CSM)**

The following CSM discussion includes areas where DoD military munitions may be present, sources of contamination, release mechanisms, migration pathways, and potential receptors identified for the Landfill North of Winklepeck MRS.

#### ***E.4.1 Primary and Secondary Contaminant Sources and Release Mechanisms***

The general and munitions-related burial and disposal activities associated with the nearby Winklepeck Burning Grounds were considered the primary sources of potential explosive hazards at the Landfill North of Winklepeck MRS (CB&I, 2015). An associated secondary source of MC-related contamination would be the release of MC contamination from the disposed ash, explosive plant residue, and munitions filler remnants. During the 2007 SI field activities, the Army documented MD characterized as unidentified bomb casing fragments and an empty 105mm projectile. The release mechanism evaluated by the Army during the RI included the potential for previous disposal of military munitions in the MRS that could result in munitions present on the surface, buried in subsurface soil, or within the surface water in both the accessible and inaccessible areas of the MRS (CB&I, 2015). During the RI, no DoD military munitions or concentrated areas of MD were observed on the surface and subsurface anomalies were assumed to be consistent with the surface cultural debris documented during the visual survey. The Army concluded that no DoD military munitions are present at the MRS and no release of MC-related contamination has occurred at the Landfill North of Winklepeck MRS (CB&I, 2015).

#### ***E.4.2 Contaminant Migration Pathways***

The fact neither DoD military munitions nor concentrated areas of MD were encountered by the Army during SI and RI field activities provides evidence that MC-related contamination is not present at the Landfill North of Winklepeck MRS. Therefore, the Army concluded that exposure pathways for surface and subsurface soils and surface water were incomplete (CB&I, 2015).

#### ***E.4.3 Potential Human Receptors and Ecological Receptors***

The likely human receptors identified for the Landfill North of Winklepeck MRS include facility personnel, contractors, occasional trespassers, and National Guard trainees. Environmental receptors at the MRS include aquatic biota, terrestrial invertebrates (earthworms), voles, shrews, rabbits, robins, foxes, hawks, muskrats, ducks, minks, and benthic invertebrates (insect larvae, crayfish, snails, clams, and bivalves) (CB&I, 2015).

### **F. CURRENT AND POTENTIAL FUTURE LAND AND RESOURCE USES**

Current activities at the Landfill North of Winklepeck MRS include maintenance activities, environmental sampling, and natural resource management. Receptor accessibility of the MRS is restricted by a gate associated with an adjacent operational range area (CB&I, 2015). Future land use activities are expected to stay the same with the addition of military training (HGL, 2017).

### **G. SUMMARY OF SITE RISKS**

The Munitions and Explosives of Concern (MEC) Hazard Assessment (HA), Human Health Risk Assessment (HHRA), and Ecological Risk Assessment (ERA) estimate risks posed to human and ecological receptors based on site characteristics, results of previous investigations, and evaluation of the conceptual site model.

#### **G.1 Munitions and Explosives of Concern (MEC) Hazard Assessment (HA)**

As part of the RI, the Army evaluated for explosive safety hazards at the Landfill North of Winklepeck MRS using the MEC HA. Because DoD military munitions were not encountered at the Landfill North of Winklepeck MRS during either the 2007 SI or the subsequent 2015 RI, the Army determined that explosive safety hazards associated with such munitions were not present. Therefore, the Army determined that evaluation of the Landfill North of Winklepeck MRS in a MEC HA was not warranted (CB&I, 2015).

#### **G.2 Human Health Risk Assessment (HHRA) and Ecological Risk Assessment (ERA)**

The purpose of the HHRA is to document whether MRS conditions may pose a risk to current or future human receptors and to identify which, if any, MRS conditions need to be addressed further in the CERCLA process. An ERA evaluates the potential for adverse effects posed to ecological receptors from the release of MC-related contamination at a MRS.

Because the Army did not encounter DoD military munitions, concentrated areas of MD, or evidence of munitions use during either the 2007 SI or 2015 RI conducted at the Landfill North of Winklepeck MRS, media sampling for MC-related contamination was not warranted. Therefore, the Army did not perform an HHRA or an ERA for the MRS and determined that there was no risk from MC-related contamination is present at the MRS (CB&I, 2015).

### **H. DOCUMENTATION OF NO SIGNIFICANT CHANGE**

The NFA PP for the Landfill North of Winklepeck MRS (HGL, 2017) was released for public comment on November 3, 2017. The PP recommended NFA under the MMRP and pursuant to CERCLA for the Landfill North of Winklepeck MRS. After the public comment period, no significant changes regarding the selected remedy, as originally identified in the NFA PP, were necessary or appropriate.

## **PART III: RESPONSIVENESS SUMMARY FOR PUBLIC COMMENTS ON THE PROPOSED PLAN FOR RVAAP-019-R-01 LANDFILL NORTH OF WINKLEPECK**

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### **A. Overview**

In November 2017, the Army released the NFA PPs and hosted a public meeting for Atlas Scrap Yard, Block D Igloo-D, Landfill North of Winklepeck, and Ramsdell Quarry Landfill Area 1 North MRSs. The 30-day public comment period was held from November 3, 2017 to December 8, 2017.

### **B. Stakeholder Issues and Lead Agency Responses**

No site-specific verbal comments were received during the public meeting. The transcript from the meeting was incorporated into the Administrative Record.

#### **B.1 Oral Comments from Public Meeting**

No oral comments or questions were received from members of the public at the November 2017 public meeting.

#### **B.2 Written Comments from Public Meetings**

No written comments or questions were received from members of the public at the November 2017 public meeting.

#### **B.3 Telephone Comments from Public**

Various telephone inquiries were received from members of the public following publication of the news releases and prior to the November 8, 2017 public meeting. A summary of each inquiry is provided below.

##### ***B.3.1 Storage and Disposal Activities at Each MRS***

***Comment:*** A local resident contacted Ms. Kathryn Tait on October 25, 2017 inquiring the plans for the four MRSs listed in the public notice and asking what would be stored and disposed of at the MRSs.

***Response:*** Ms. Tait briefly discussed the history of these MRSs, the current and future land uses, and the meaning of the No Further Action alternative. During the discussion, Ms. Tait described the current and future land use at each MRS as military training and stated no munitions would be stored or disposed of at these MRSs in the future. In closing, Ms. Tait suggested if the local resident had additional questions that he contact her again, visit RVAAP.org, and/or attend the November 8, 2017 public meeting.

##### ***B.3.2 Location of the Public Meeting***

***Comment:*** A council woman from the City of Kent contacted Ms. Kathryn Tait on October 26, 2017 for clarification on the location of the November 8, 2017 public meeting.

***Response:*** Ms. Tait confirmed that the November 8, 2017 public meeting would be held at the Charlestown Hall at 6 p.m. and provided the physical address of the building location to the caller.

##### ***B.3.3 Synopsis of Conclusions and Proposed Alternatives***

***Comment:*** The council woman from the City of Kent noted in the previous comment was unable to attend the November 8, 2017 public meeting and contacted Ms. Kathryn Tait on November 9, 2017 to discuss the conclusions and proposed alternatives for each MRS.

***Response:*** Ms. Tait returned the phone call on November 13, 2017 and summarized the conclusions and proposed alternatives for each MRS. Ms. Tait indicated that no explosive hazards have been found at any MRS, that all four MRSs were proposed for No Further Action, and that the Ohio EPA concurs with No Further Action. Ms. Tait suggested the council woman review the slide presentation for a synopsis of each

MRS including the history and the proposed alternatives. Ms. Tait provided the council woman with a copy of the slide presentation by email for her review.

**C. Technical and Legal Issues**

There were no technical or legal issues raised during the public comment period.

## REFERENCES

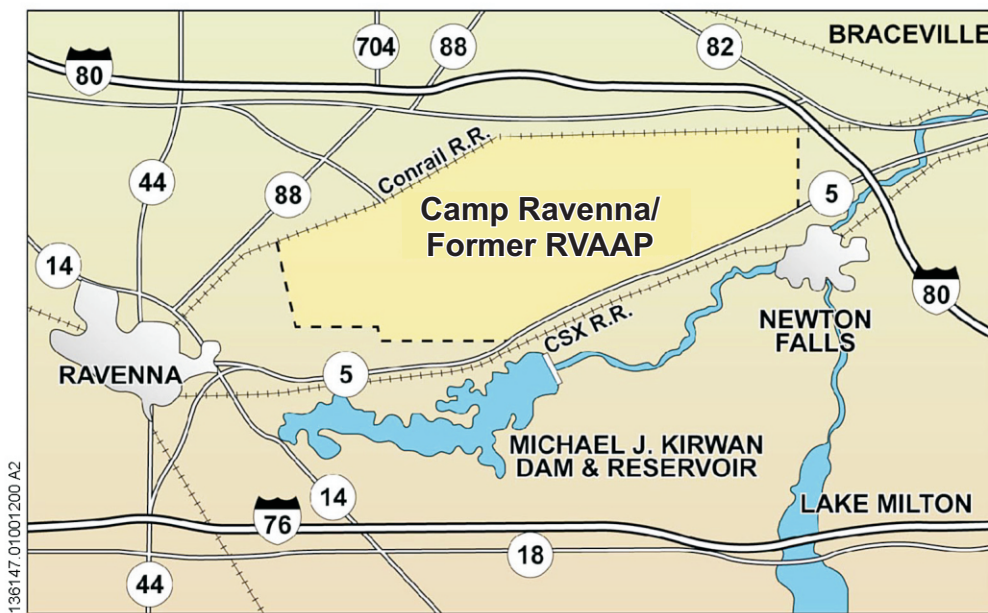
- CB&I Federal Services, LLC (CB&I), 2015. *Final Remedial Investigation Report for RVAAP-019-R-01 Landfill North of Winklepeck MRS and RVAAP-060-R-01 Block D Igloo MRS, Version 1. Former Ravenna Army Ammunition Plant, Portage and Trumbull Counties, Ohio*. March.
- Engineering-Environmental Management, Inc. (e<sup>2</sup>M), 2007. *Final Military Munitions Response Program Historical Records Review, Ravenna Army Ammunition Plant, Ohio*, January.
- e<sup>2</sup>M, 2008. *Final Site Inspection Report, Ravenna Army Ammunition Plant, Ohio, Military Munitions Response Sites*, May.
- HydroGeoLogic, Inc. (HGL), 2017. *Final No Further Action Proposed Plan for RVAAP-019-R-01 Landfill North of Winklepeck Munitions Response Site Former Ravenna Army Ammunitions Plant, Portage and Trumbull Counties, Ohio*. August.
- Ohio Army National Guard (OHARNG), 2014. *Integrated Natural Resources Management Plan (INRMP) at the Camp Ravenna Joint Military Training Center, Portage and Trumbull Counties, Ohio*. December.
- Ohio Environmental Protection Agency (Ohio EPA), 2004. *Director's Final Findings and Orders (DFFO) for RVAAP*, Division of Emergency and Remedial Response, June 10.
- Army (DA), 2009. *Final United States Army Military Munitions Response Program Munitions Response Remedial Investigation/Feasibility Study Guidance*. November.
- U.S. Army Corps of Engineers (USACE), 2017. *Final Community Relations Plan for the Ravenna Army Ammunition Plant Restoration Program in Portage and Trumbull Counties, Ohio*. March
- U.S. Fish and Wildlife Service (USFWS), 2018. Environmental Conservation Online System: Species Profile for Northern Long-Eared Bat (*Myotis septentrionalis*). <https://ecos.fws.gov/ecp0/profile/speciesProfile;jsessionid=6DA47AE967841D502600201F99E9370B?spcode=A0JE>. Accessed January 2, 2018.

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## **FIGURES**

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 (01)Location\_Map.cdr  
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 Source: CB&I

Legend

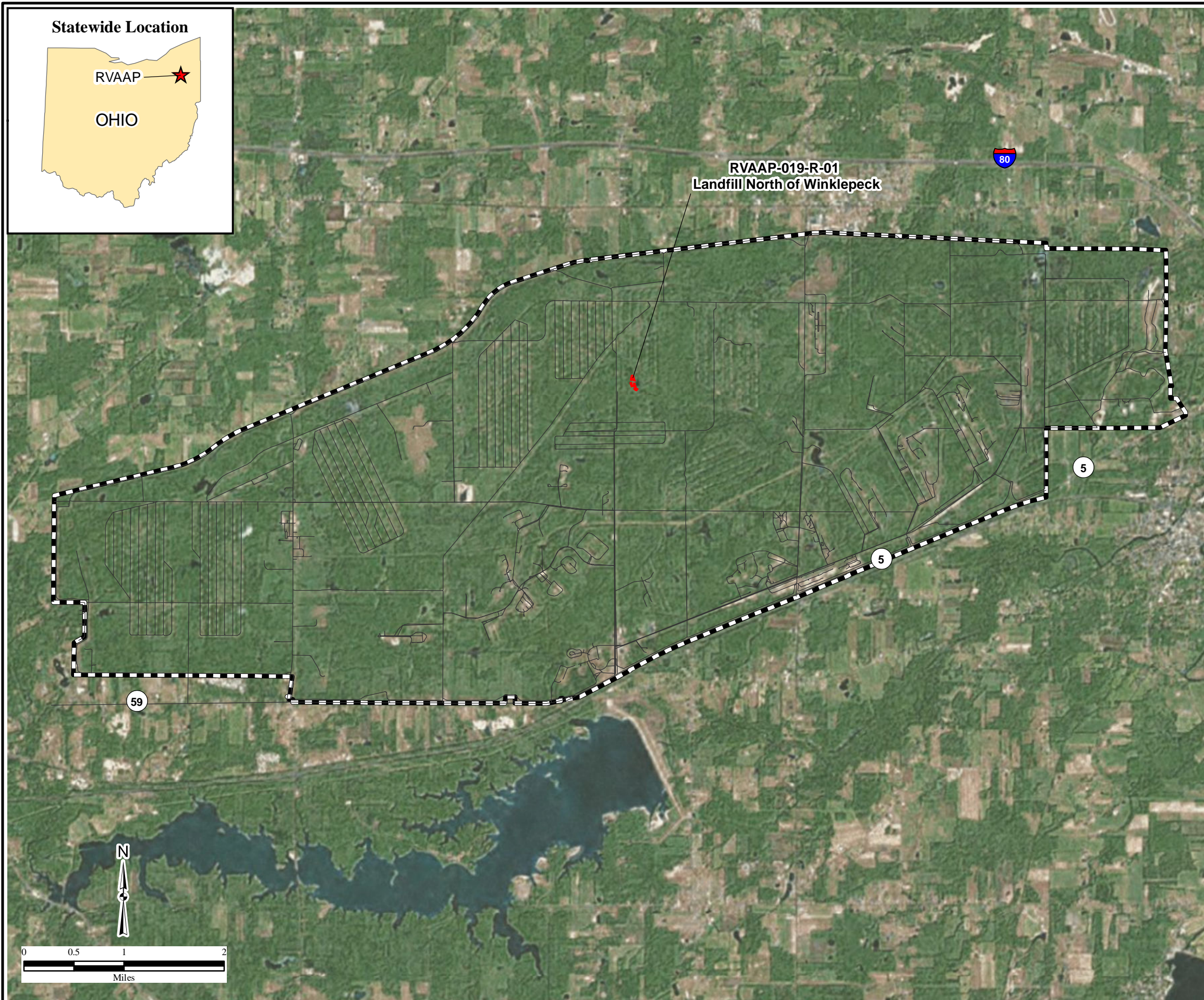
 Camp Ravenna/Former RVAAP

**Figure 1**  
**Location Map**  
**Camp Ravenna/**  
**Former RVAAP**  
**Portage and Trumbull**  
**Counties, Ohio**



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**Figure 2**  
**Landfill North of Winklepeck**  
**MRS Location**  
**Camp Ravenna/Former RVAAP**  
**Portage and Trumbull Counties, Ohio**



**Statewide Location**



**Legend**

- Road
- ▭ MRS Boundary
- ▭ Installation Boundary

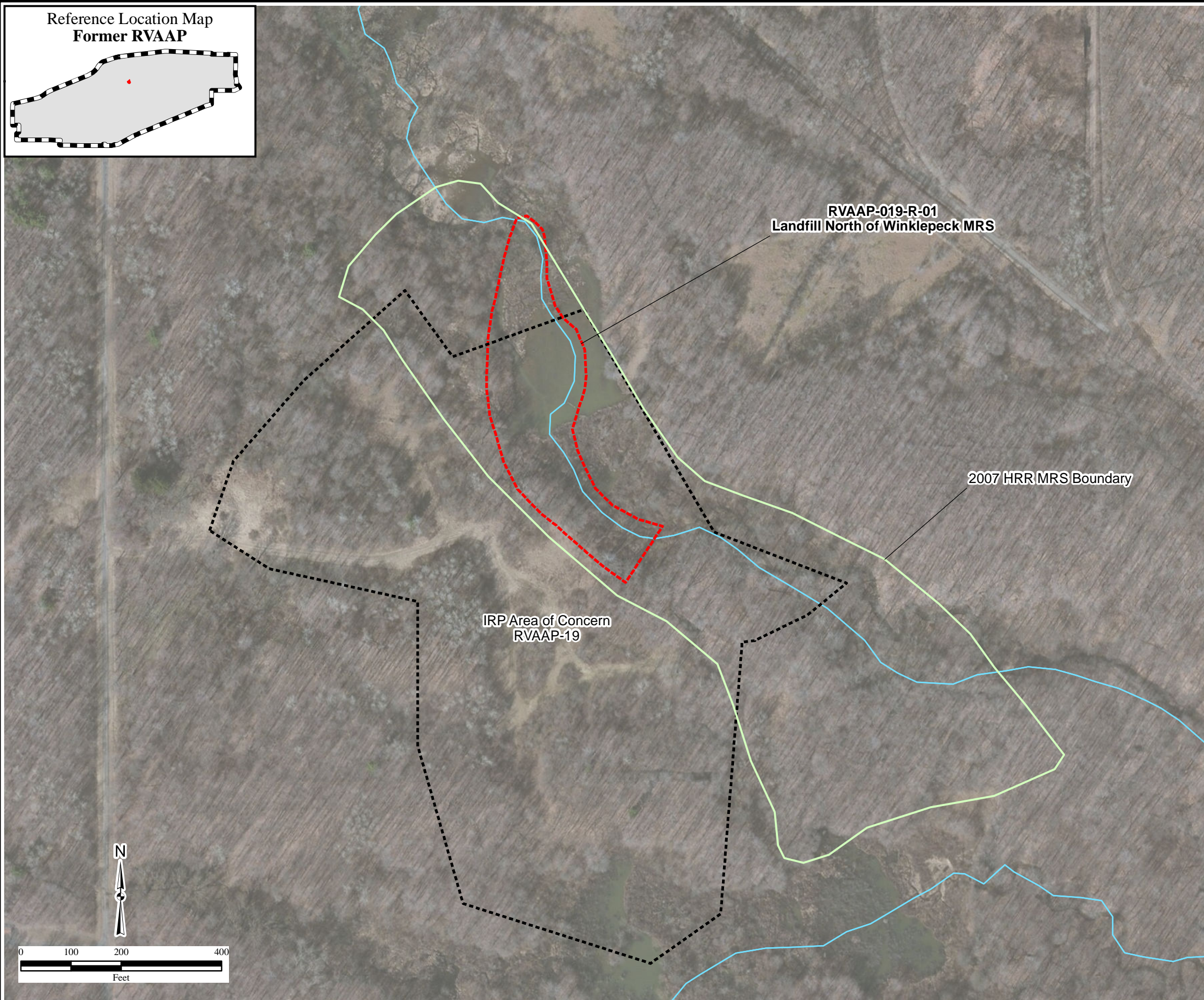
Notes:  
MRS=munitions response site  
RVAAP=Ravenna Army Ammunition Plant

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Source: HGL, CB&I, USACE, e3M  
ArcGIS Online Imagery







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**Figure 3**  
**Landfill North of Winklepeck MRS**  
**Previous Investigation Footprints**  
**Camp Ravenna/Former RVAAP**  
**Portage and Trumbull Counties, Ohio**

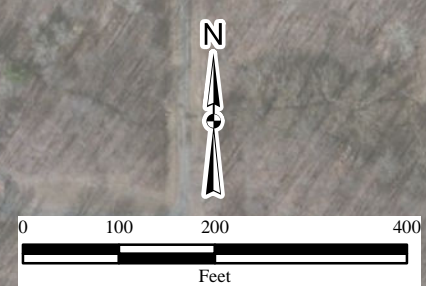


Legend

-  IRP Area of Concern Boundary
-  2007 HRR MRS Boundary
-  MRS Boundary
-  Installation Boundary

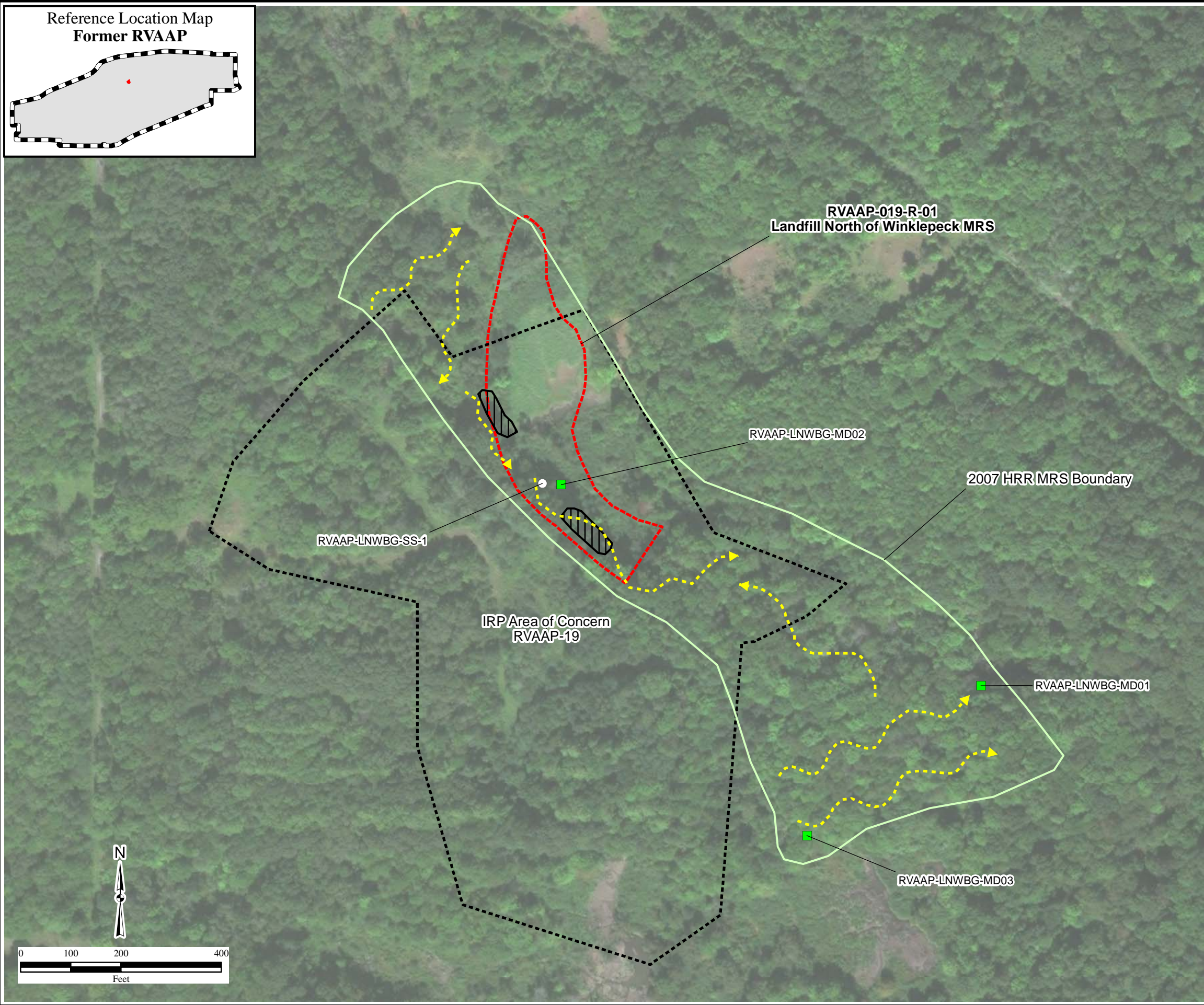
Notes:  
HRR=Historical Records Review  
IRP=Installation Restoration Program  
MRS=munitions response site  
RVAAP=Ravenna Army Ammunition Plant

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Source: HGL, CB&I, USACE, eM  
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**Figure 4**  
**Landfill North of Winklepeck MRS**  
**2008 Site Inspection Results**  
**Camp Ravenna/Former RVAAP**  
**Portage and Trumbull Counties, Ohio**



Legend

- Soil Sample
- Munition Debris
- > Meandering Path Survey Transect
- ▨ Subsurface Anomaly Area
- ⋯ IRP Area of Concern Boundary
- 2007 HRR MRS Boundary
- - - MRS Boundary
- ⊠ Installation Boundary

Munition Debris	Item Description
RVAAP-LNWBG-MD01	Fragmented bomb casing
RVAAP-LNWBG-MD02	Empty flare canister
RVAAP-LNWBG-MD03	Empty 105mm projectile

Notes:  
Munitions debris items identified during the October 2007 Site Inspection field effort.

HRR=Historical Records Review  
IRP=Installation Restoration Program  
MRS=munitions response site  
RVAAP=Ravenna Army Ammunition Plant

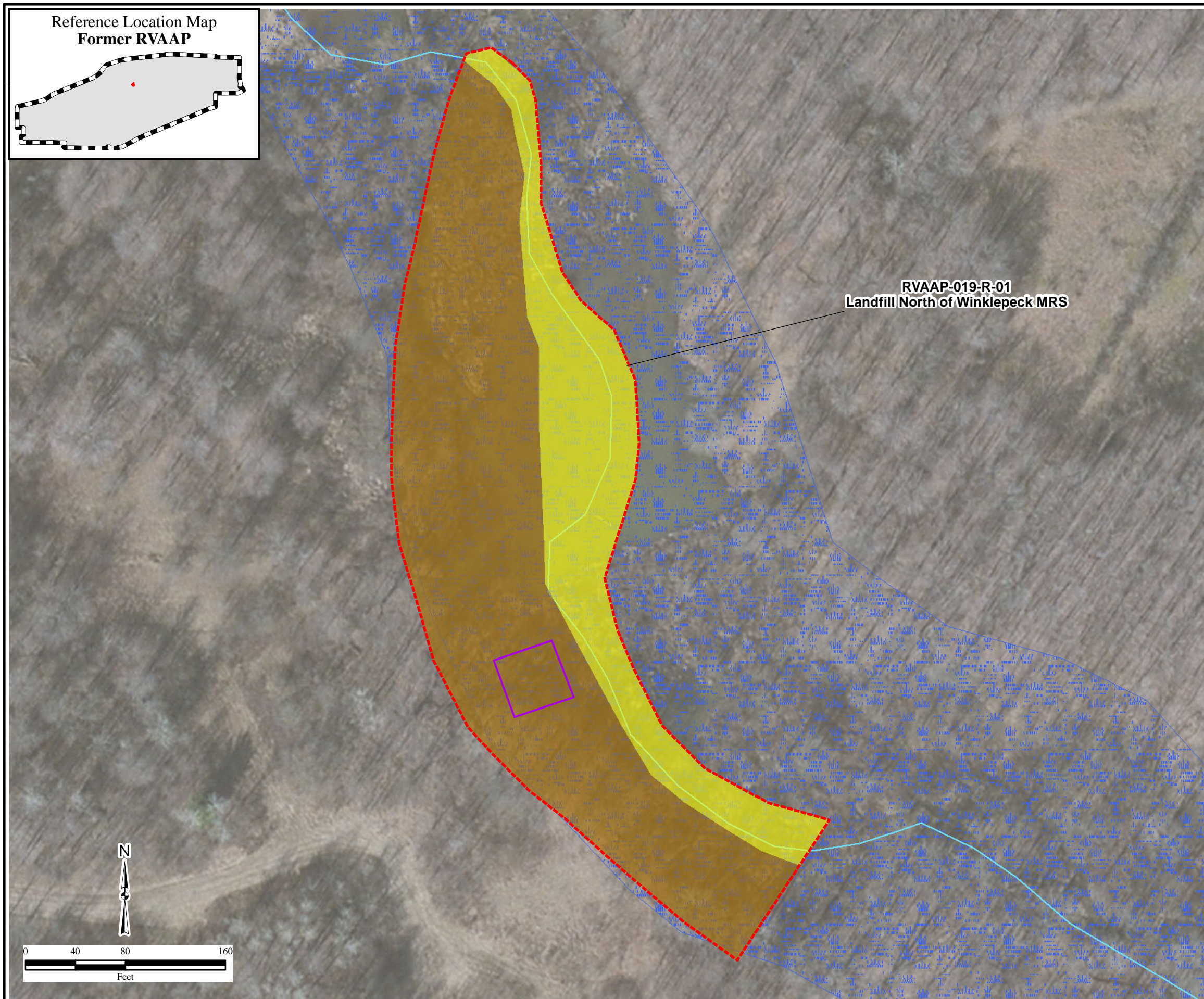
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Source: HGL,CB&I, USACE, e<sup>2</sup>M










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**Figure 5**  
**Landfill North of Winklepeck MRS**  
**2015 Remedial Investigation Results**  
**Camp Ravenna/Former RVAAP**  
**Portage and Trumbull Counties, Ohio**



Legend

-  Stream
-  Primary Area of Debris Along Slope
-  Inaccessible Area (Water)
-  Surface Sweep Complete  
(No Munitions Debris or Material Potentially Presenting Explosive Hazard Items Found)
-  Planning Level Surveys Wetland
-  MRS Boundary
-  Installation Boundary

Notes:  
MRS—munitions response site  
RVAAP—Ravenna Army Ammunition Plant

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9/25/2017 JAR  
Source: HGL, CB&I, USACE, e3M  
ArcGIS Online Imagery



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**Appendix A**  
**Notice of Availability of the Proposed Plan**

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Affidavit of Publication, Tribune Chronicle, October 22 and 29, 2017



**NEWS RELEASE**  
**Camp Ravenna Joint Military Training Center**  
 Camp Ravenna Environmental Office  
 1438 State Route 534 SW - Newton Falls, OH 44444  
 614-336-6136

**Public meeting to be held Wednesday, November 8, 2017  
 for Army National Guard Release of  
 Proposed Plans for Munitions and Explosives of Concern and  
 Munitions Constituents at four Munitions Response Sites:  
 Ramadell Quarry Landfill Area 1, North  
 Atlas Scrap Yard  
 Landfill North of Winklepeck  
 Block D Igloo-TD**

Ravenna - The Army National Guard, in consultation with the Ohio Environmental Protection Agency, submits for public review and comments four (4) Proposed Plans for munitions and explosives of concern and munitions constituents with former national defense program activities at the former Ravenna Army Ammunition Plant (RVAAP) in Portage and Trumbull counties, Ohio. The Ramadell Quarry Landfill Area 1, North; Atlas Scrap Yard; Landfill North of Winklepeck; and Block D Igloo-TD are Munitions Response Sites (MRSs) within the former RVAAP (now known as Camp Ravenna) in Portage and Trumbull Counties, Ohio. These MRSs are being addressed under the Military Munitions Response Program (MMRP) in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The Proposed Plans present the current status and information regarding the MRSs. The Proposed Plans detail the recommendation for No Further Action at each MRS and provide the rationale for these recommendations. On Wednesday November 8, 2017, a public meeting will be held at the Charlestown Township Hall at 6366 Rock Spring Road, Ravenna, Ohio 44296 beginning at 6:00 p.m., with an informal open house when technical staff will be available to answer questions. At 6:30 p.m., the Army National Guard will briefly describe the assessment of the MRSs, present the No Further Action recommendation, and then request verbal comments from the public. Written comments regarding this recommendation may be submitted to the Army National Guard during the 30-day comment period from November 3, 2017 to December 8, 2017. All written comments should be addressed to Camp Ravenna Environmental Office, 1438 State Route 534 SW, Newton Falls, OH 44444 or sent via email to [Kathryn.s.tan.nga@mail.mil](mailto:Kathryn.s.tan.nga@mail.mil). In accordance with CERCLA, the No Further Action recommendation presented in the Proposed Plans is also presented in earlier remedial investigation reports. All reports are now available for public review at the RVAAP Restoration Program Information Repository at the Reed Memorial Library (167 East Main Street, Ravenna) and the Newton Falls Public Library (204 South Canal Street, Newton Falls). The reports are also available online at [www.rvaap.org](http://www.rvaap.org). The final remedy for each MRS will be selected based, in part, on public comments. In coordination with Ohio Environmental Protection Agency, the Army National Guard will select a final remedy after reviewing and considering all public comments submitted during the 30-day public comment period from November 3, 2017 to December 8, 2017. The Army National Guard encourages the public to review and comment on the recommendation presented in this document. For more information or to participate in the review, please visit the RVAAP Restoration Program website ([www.rvaap.org](http://www.rvaap.org)) or call Katie Tan at 614-336-6136.

#265-2T - October 22 & 29, 2017 • #WOH033481

PROOF OF PUBLICATION

STATE OF OHIO  
 TRUMBULL COUNTY

SS: PAMELA EAZOR

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SUNDAY FOR (2) TWO  
 CONSECUTIVE WEEKS AND THAT THE FIRST INSERTION WAS  
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1ST DAY OF November 2017

*Lawrence J. Kovach*  
 NOTARY PUBLIC

**LAWRENCE J. KOVACH, Notary Public**  
 STATE OF OHIO  
 MY COMMISSION EXPIRES SEPTEMBER 23, 2022

SEAL

 **NEWS RELEASE**  
**Camp Ravenna Joint Military Training Center**  
Camp Ravenna Environmental Office  
1438 State Route 534 SW – Newton Falls, OH 44444  
614-336-6136

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Affidavit of Publication, Record Courier, October 22 and 29, 2017

**Proof of Publication**

Record Publishing Company  
1050 W. Main Street,  
Kent, OH 44240  
Phone (330) 541-9400  
Fax (330) 673-6363

 being first duly sworn depose and say that I am Advertising Clerk of  
**Record Publishing Company**

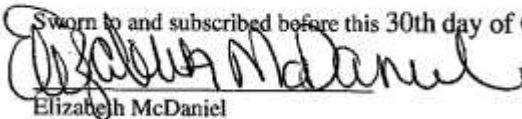
30 Record-Courier a newspaper printed and published in the city of Kent, and of General circulation in the County of Portage, State of Ohio, and personal knowledge of the facts herein stated and that the notice hereto annexed was Published in said newspapers for 2 insertions on the same day of the week from and after the 22nd day of October, 2017 and that the fees charged are legal.



Name of Account: HydroGeoLogic Inc  
Ad Number: 12376892  
No. of Lines: 72

Day(s) Published: 10/22, 10/29.

Sworn to and subscribed before this 30th day of October, 2017.



Elizabeth McDaniel  
Notary Public  
Commission Expires June 19, 2021

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