

Draft
No Further Action Record of Decision for
RVAAP-061-R-01 Block D Igloo-TD
Munitions Response Site
Version 1.0

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®**

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April 26, 2018

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Documentation of Ohio EPA Concurrence with Final Document

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(Documentation to be provided once concurrence is issued)

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CONTRACTOR'S STATEMENT OF INDEPENDENT TECHNICAL REVIEW

HydroGeoLogic, Inc. has completed the *Draft No Further Action Record of Decision for RVAAP-061-R-01 Block D Igloo-TD Munitions Response Site*, Version 1.0, 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:  Date: April 24, 2018
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Project Scientist
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Reviewed/Approved by:  Date: April 26, 2018
Kimberly Vaughn
Project Manager
HydroGeoLogic, Inc.,

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Gail Harris, RVAAP Administrative Record Manager	2	2

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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ACRONYMS AND ABBREVIATIONS

137	AOC	Area of Concern
138	Army	U.S. Department of the Army
139	ASR	<i>Final Archives Search Report</i>
140	Camp Ravenna	Camp Ravenna Joint Military Training Center
141	CB&I	CB&I Federal Services, LLC
142	CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act</i>
143	CTT	Closed, Transferring, or Transferred
144	DA	Department of the Army
145	DERP	Defense Environmental Restoration Program
146	DFFO	<i>Director's Final Findings and Orders</i>
147	DoD	Department of Defense
148	e ² M	engineering-environmental Management, Inc.
149	GOCO	Government-Owned and Contractor-Operated
150	HGL	HydroGeoLogic, Inc.
151	HRR	<i>Military Munitions Response Program Historical Records Review</i>
152	I&E	Installation and Environment
153	lb	pound
154	MC	munitions constituents
155	MMRP	Military Munitions Response Program
156	MRS	munitions response site
157	NCP	<i>National Oil and Hazardous Substances Pollution Contingency Plan</i>
158	NFA	No Further Action
159	NFA Proposed Plan	<i>Final No Further Action Proposed Plan for RVAAP-061-R-01 Block D Igloo-TD</i>
160		<i>Munitions Response Site</i>
161	Ohio EPA	Ohio Environmental Protection Agency
162	OHARNG	Ohio Army National Guard
163	PP	Proposed Plan
164	RAB	Restoration Advisory Board
165	RI	Remedial Investigation
166	ROD	Record of Decision
167	RVAAP	Ravenna Army Ammunition Plan
168	SARA	<i>Superfund Amendments and Reauthorization Act</i>
169	Shaw	Shaw Environmental & Infrastructure
170	SI	Site Inspection
171	<i>SI Report</i>	<i>Final Site Inspection Report</i>
172	TD	Transferred
173	TNT	2,4,6-Trinitrotoluene
174	U.S.	United States
175	USACE	U.S. Army Corps of Engineers
176	USP&FO	U.S. Property and Fiscal Officer
177	UXO	unexploded ordnance
178	Work Plan	<i>Final Work Plan for Military Munitions Response Program Remedial</i>
179		<i>Investigation Environmental Services</i>

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PART I: DECLARATION

A. SITE NAME AND LOCATION

The United States (U.S.) Department of the Army (DA or “Army”) developed this No Further Action (NFA) Record of Decision (ROD) at RVAAP-061-R-01 Block D Igloo-Transferred (TD) Munitions Response Site (MRS). The Block D Igloo-TD MRS is located outside of the Camp Ravenna (**Figure 1**). The Block D Igloo-TD MRS includes two properties located outside of the northern boundary of Camp Ravenna within the community of Windham (**Figure 2**).

The Ravenna Army Ammunition Plant (RVAAP) is now known as the Camp Ravenna Joint Military Training Center (Camp Ravenna). Camp Ravenna is 21,683 acres and is federally owned. The facility 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 Army is the lead 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 Block D Igloo-TD MRS at the 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 Block D Igloo-TD MRS.

The Ohio EPA, the supporting state regulatory agency, reviewed and concurred with the *Final No Further Action Proposed Plan for RVAAP-061-R-01 Block D Igloo-TD Munitions Response Site* (NFA Proposed Plan; HydroGeoLogic, Inc. [HGL], 2017). The NFA Proposed Plan (PP) presented the Army’s preferred remedy for addressing the Block D Igloo-TD MRS and invited public involvement during the comment period (November 3, 2017 through December 8, 2017) and public meeting (November 8, 2017). No U.S. Department of Defense (DoD) military munitions (i.e., unexploded ordnance, discarded military munitions, or munitions constituents [MC]-related contamination) originating from historical activities associated with the Block D Igloo-TD MRS have been encountered throughout the CERCLA process. The NFA determination under the CERCLA process at the Block D Igloo-TD MRS satisfies the requirements of the *Director’s Final Findings and Orders* (DFFO) (Ohio EPA, 2004).

C. DESCRIPTION OF THE SELECTED REMEDY

The Army determined there is no possibility that munitions and explosives of concern may have travelled beyond the Camp Ravenna boundary and into the Block D Igloo-TD MRS and there is, therefore, no source of MC-related contamination. This determination is based on the Remedial Investigation (RI) completed under the Military Munitions Response Program (MMRP) (CB&I Federal Services LLC [CB&I], 2015). Therefore, NFA is the selected remedy for the Block D Igloo-TD MRS under the MMRP pursuant to CERCLA.

D. STATUTORY DETERMINATION

The results of the RI fieldwork for the Block D Igloo MRS support the determination that there is no risk associated with exposure to DoD military munitions, or MC-related contamination at the Block D Igloo-TD MRS. The Army has determined that NFA is acceptable for the Block D Igloo-TD 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.

E. AUTHORIZING SIGNATURE

Erik T. Gordon
COL, GS
Chief, Installation and Environment (I&E)

Date

PART II: DECISION SUMMARY

A. SITE NAME, LOCATION, AND DESCRIPTION

The RVAAP, now known as the 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 facility is federally owned and is approximately 11 miles long and 3.5 miles wide. The facility is bounded by State Route 5, the Michael J. Kirwan Reservoir, and the CSX System Railroad to the south; Garret, McCormick, and Berry Roads to the west; the Norfolk Southern Railroad to the north; and State Route 534 to the east (**Figure 1**). Camp Ravenna is surrounded by the communities of Windham, Garrettsville, Newton Falls, Charlestown, and Wayland.

Administrative accountability of the 21,683-acre facility has been transferred to the USP&FO 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 Block D Igloo-TD MRS is located just outside the northern boundary of Camp Ravenna and consists of two non-contiguous areas totaling 14.13 acres (**Figure 2**). The MRS is within the community of Windham, which includes residences, farm fields, and stands of woodlands. The Block D Igloo-TD MRS is being investigated under the MMRP that 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 Block D Igloo-TD 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, the 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 conducted at the 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 Areas of Concern (AOCs) associated with the RVAAP include landfills, an aircraft fuel tank testing area, and various industrial support and maintenance facilities (CB&I, 2015).

The Block D Igloo-TD MRS was identified as a result of an explosion that occurred on Camp Ravenna at the “D” Block storage bunkers (igloos). These igloos are located in the north-central portion of Camp

Ravenna. On March 24, 1943, 2,516 clusters of M-41 20-pound (lb) fragmentation bombs exploded in Igloo 7-D-15 as they were being loaded into the bunker for storage. The explosion was reported to have been caused by rough handling and the faulty design of the M-110 fuze. Concrete fragments from the blast were reportedly distributed as far as 3,800 feet east toward the “E” Block igloos. Based on the concrete fragment locations identified during the 1943 cleanup effort, a blast radius of 3,000 feet for munitions fragments was estimated. A portion of this blast radius (approximately 19.25 acres) extended beyond the facility boundary, north of the explosion area, and was considered separately as the Block D Igloo-TD MRS (RVAAP-062-R-001) (**Figure 3**).

Information obtained during the Site Inspection (SI) indicated non-munitions related debris fragments from the 1943 explosion had been observed outside of Camp Ravenna at two locations as far as 2.9 miles (15,000 feet) to the northeast. The Army concluded in the SI Report that the presence of the debris fragments at these two locations (denoted as Area 1 and Area 2) represented the potential for military munitions to be present beyond Camp Ravenna boundaries. Area 1 and Area 2 were non-contiguous areas and were located approximately 2.2 and 2.9 miles northeast of the former Igloo-7-D-15, respectively. The combined acreage of Area 1 and Area 2 is 14.13 acres and was considered as the revised Block D Igloo-TD MRS (CB&I, 2015). The revised Block D Igloo-TD MRS is depicted in **Figure 4**. There have been no CERCLA enforcement actions related to the Block D Igloo-TD MRS.

C. COMMUNITY PARTICIPATION

Using the Camp Ravenna community relations program, the Army and the Ohio EPA have interacted with the public through public notices, 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 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* (U.S. Army Corps of Engineers [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.

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 Block D Igloo-TD 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. Copies of the notice of availability for the NFA PP sent to the Tribune Chronicle and Record Courier are included in Appendix A.

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 Block D Igloo-TD MRS 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 Block D Igloo-TD MRS. 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 Block D Igloo-TD 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 established that no DoD military munitions are present within the Block D Igloo-TD MRS. 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 affected environmental media associated with DoD military munitions at the Block D Igloo-TD MRS. The NFA determination is protective of the receptors associated with future land use at the Block D Igloo-TD MRS.

E. SITE CHARACTERISTICS

This section provides a brief overview of the Block D Igloo-TD MRS that includes general information regarding the physical characteristics of the MRS areas, previous investigations completed for the MRS under the MMRP, and the overall nature and extent of contamination at the MRS.

E.1 Physical Characteristics

The Block D Igloo-TD MRS is located outside the northern boundary of Camp Ravenna and consists of two non-contiguous areas totaling 14.13 acres (**Figure 2**). The MRS is within the community of Windham, which includes residences, farm fields, and stands of woodlands (**Figure 4**). Area 1 and Area 2 are located approximately 2.2 and 2.9 miles, respectively, northeast of former Igloo 7-D-15 that exploded in 1943. Area 1 is approximately 12 acres and is located on two properties that are adjacent to the Camp Ravenna boundary. Both of these properties are agricultural land that contain residences. Area 1 is mostly heavily wooded with an area of open field. Area 2 is located approximately 0.7 miles northeast of Area 1 and is 2.13 acres. Area 2 is heavily wooded and is located adjacent to the west of Windham Park that is a local recreational area containing several baseball fields. The nearest residence to Area 2 is approximately 1,000 feet to the south. The topography of the MRS areas is relatively flat and there are no surface water features on any of the properties that make up the MRS (environmental-engineering Management, Inc. [e²M], 2008).

E.2 Site Investigations

This section summarizes the CERCLA activities that have been completed at and in support of the Block D Igloo-TD MRS under the MMRP.

E.2.1 Archives Search Report (ASR)

The USACE conducted an archives search in 2004 under the DERP as a historical records search and SI for the presence of DoD military munitions that potentially presented explosives hazards at the former RVAAP. The *Final Archives Search Report (ASR)* was prepared by the USACE in 2004 and identified 12 AOCs as well as four additional locations with the potential for DoD military munitions. The four additional locations included former Igloo 7-D-15 that was referred to as “Block D Igloo”. The ASR indicated that

the area surrounding former Igloo 7-D-15 potentially contained explosives ordnance. The ASR did not specifically mention the potential for explosives ordnance associated with the Block D Igloo explosion to be outside the former RVAAP boundaries (USACE, 2004).

E.2.2 Historical Records Review (HRR)

In 2007, the Army prepared the *Military Munitions Response Program Historical Records Review* (HRR, e²M, 2007) for Camp Ravenna that included the Block D Igloo-TD MRS. The HRR summarized the investigation following the accidental explosion at Igloo 7-D-15 on March 24, 1943, and the development of the initial MRS boundary by the USACE, Huntsville District. Based on the historical records of the explosion and information presented in the *U.S. Army Closed, Transferring, or Transferred (CTT) Range/Site Inventory* prepared for the former RVAAP, the detonation of bombs in Igloo 7-D-15 caused multiple fatalities and sent shrapnel and demolished material up to 2.9 miles (15,000 feet) away onto properties that were outside of the former RVAAP. However, a majority of the demolished material was reported to have landed 1.3 to 2 miles to the northeast of the igloo, within former RVAAP boundaries. The material consisted of concrete fragments, parts of clothing, and an oil filter from a vehicle. The *U.S. Army CTT Range/Site Inventory* further noted that cluster bombs may have been propelled from the igloo, as well (e²M, 2007).

A map created by former RVAAP personnel after the explosion depicted the spread of debris from the blast. Based on the report, the MRS boundary was established by applying a 3,000-foot diameter circle (“for high explosive bombs”) centered on and surrounding Igloo 7-D-15; this resulted in a total MRS acreage of approximately 622.24 acres. A portion of the circle that was 19.25 acres extended beyond the installation boundary and was considered separately as a transferred site, Block D Igloo-TD (e²M, 2007) (**Figure 3**).

During preparation of the HRR in support of the SI field activities, the Army identified additional information from a USACE Rock Island District Map that non-munitions-related debris fragments (i.e., pieces of concrete) from the 1943 explosion had been reported at two off-post locations that were not included as part of the original 19.25-acre MRS. The debris was reportedly observed as far as 2.9 miles (15,000 feet) to the northeast of former Igloo-7-D-15 which was the furthest distance identified in the *U.S. Army CTT Range/Site Inventory* that demolished material from the blast had landed.

E.2.3 Site Inspection (SI)

In 2007, the Army completed an SI under the MMRP at Camp Ravenna that included both the on-post Block D Igloo MRS and the off-post Block D Igloo-TD MRS. The SI field work at the Block D Igloo-TD MRS included a meandering path magnetometer and metal detector-assisted unexploded ordnance (UXO) surveys at three private residences and one farm field within the 19.25 acres MRS and at one private parcel located to the northeast. Although shown but not described in the *Final Site Inspection Report* (SI Report; e²M, 2008), it appears that meandering path UXO surveys were also conducted at two other locations to the west of the MRS. Samples for MC-related contamination were collected at the MRS and at the parcel to the northeast. The locations where the UXO surveys were conducted and where MC-related samples were collected during the SI field work are presented in **Figure 3**.

No DoD military munitions or MC-related contamination were encountered at the Block D Igloo-TD MRS or at the other private parcel that was investigated during the SI field work. Additionally, no observations were made of DoD military munitions or MC-related contamination at the Block D Igloo-TD MRS during the SI field work. Therefore, recommendations were made in the SI Report (e²M, 2008) to reduce the 3,000-foot radius of the Block D Igloo MRS around former Igloo 7-D-15 to 100 feet.

The SI Report (e²M, 2008) recommended investigations to determine if DoD military munitions were present at the two remaining locations identified in the *U.S. Army CTT Range/Site Inventory* that that had

not yet been investigated. The combined area of the two off-post locations, 14.13 acres, makes up the current Block D Igloo-TD MRS (CB&I, 2015). The revised boundaries for both the Block D Igloo MRS and the Block D Igloo-TD MRS following the SI are presented in **Figure 4**.

E.2.4 Remedial Investigation (RI)

In 2011, the Army prepared the *Final Work Plan for Military Munitions Response Program Remedial Investigation Environmental Services* (Work Plan; Shaw Environmental & Infrastructure [Shaw], 2011) for RIs to be conducted at remaining MRSs at Camp Ravenna. The Work Plan included an evaluation of the original estimate of how far fragments associated with the M-41 20-lb fragmentation bomb that exploded at the former Igloo 7-D-15 would have traveled. The result of this second look is that, using more recent information, the estimate of how far fragments associated with the 20-lb bomb would have traveled was reduced from 3,800 feet (the maximum distance pieces of concrete were reported following the blast) to 2,389 feet. Based on this revised distance, it was determined that no DoD military munitions-related fragments could have traveled beyond the Camp Ravenna boundary or as far as the Block D Igloo-TD MRS. (Shaw, 2011).

No RI fieldwork were conducted at the revised 14.13-acre Block D Igloo-TD MRS based on the revised calculated distance for the 20-lb bombs in the Work Plan (Shaw, 2011). An RI was conducted at the new investigation area for the on-post Block D Igloo MRS to evaluate for potential DoD military munitions associated with the 1943 explosion and to confirm the results derived in the revised calculated distance for the 20-lb bombs. The maximum horizontal distance that DoD military munitions from the explosion were encountered in the direction of the Block D Igloo-TD MRS was 1,800 feet and supported the revised calculated distance of 2,389 feet (**Figure 5**). The results of the RI fieldwork conducted at the Block D Igloo MRS confirmed no investigation at the Block D Igloo-TD MRS was necessary (CB&I, 2015).

E.3 Nature and Extent of Contamination

Data gathered by the Army during the SI and subsequent RI for the on-post Block D Igloo MRS effectively characterized the nature and extent of DoD military munitions and MC-related contamination at the off-post Block D Igloo-TD MRS.

As outlined in the RI Report, the maximum extent of DoD military munitions associated with the 1943 explosion at Igloo 7-D-15 could not have reached the Block D Igloo-TD MRS and there are no explosive hazards and no sources for a release of MC-related contamination (CB&I, 2015).

F. CURRENT AND POTENTIAL FUTURE LAND USES

The current land use of the Block D Igloo-TD MRS is residential, recreational, and agricultural. The land use is not anticipated to change in the future (HGL, 2017).

G. SUMMARY OF SITE RISKS

Under the MMRP, the selection of NFA must be protective of the human and environmental receptors at the MRS. The likely human receptors identified for future land use at the Block D Igloo-TD MRS are the Resident Receptor (Adult and Child) (Shaw, 2011). No environmental receptors have been identified.

No DoD military munitions are present on the MRS. Therefore, there is no explosive safety hazard or risk due to MC-related contamination to any receptors that may be present on the Block D Igloo-TD MRS.

H. DOCUMENTATION OF NO SIGNIFICANT CHANGE

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

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457 **PART III: RESPONSIVENESS SUMMARY FOR PUBLIC COMMENTS ON THE**
458 **PROPOSED PLAN FOR RVAAP-061-R-01 BLOCK D IGLOO-TD MRS**

459 **A. Overview**

460 In November 2017, the Army released the NFA PP and hosted a public meeting for the Atlas Scrap Yard,
461 Block D Igloo-TD, Landfill North of Winklepeck, and Ramsdell Quarry Landfill Area 1 North MRSs. The
462 30-day public comment period was held from November 3, 2017 to December 8, 2017.

463 **B. Summary of Public Comments and Agency Responses**

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

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

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

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

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

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

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

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

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

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

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

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

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

488 ***B.3.3 Synopsis of Conclusions and Proposed Remedies***

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

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

496 and the proposed remedies. Ms. Tait provided the council woman with a copy of the slide presentation by
497 email for her review.

498 **C. Technical and Legal Issues**

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

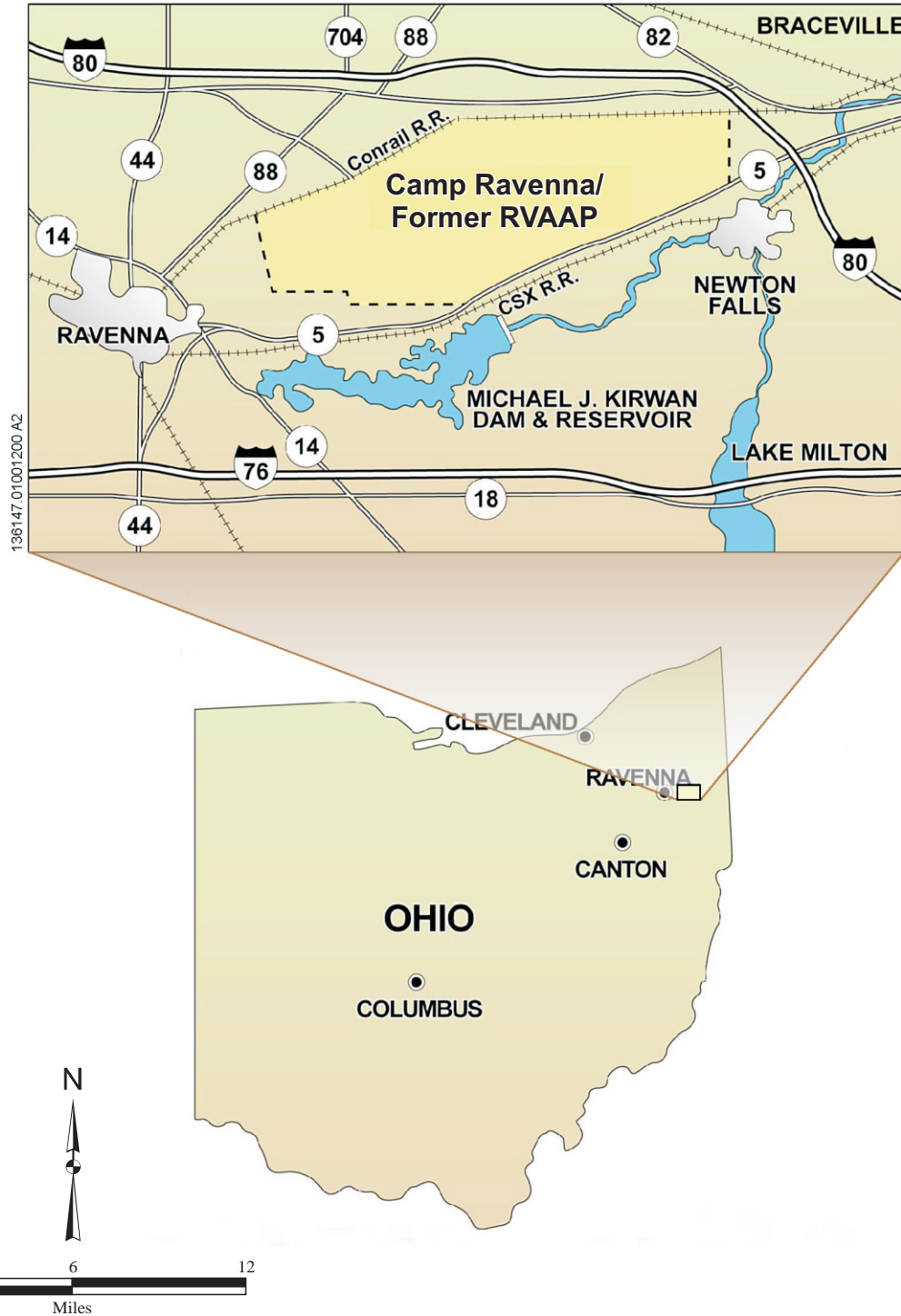
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FIGURES

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\\Gst-srv-01\HGLGIS\Ravenna_AAP\AtlasScrapYard
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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
Block D Igloo - TD MRS Location Map
Camp Ravenna/Former RVAAP
Portage/Trumbull Counties, Ohio

Legend

-  MRS Boundary
-  Facility Boundary
-  Road

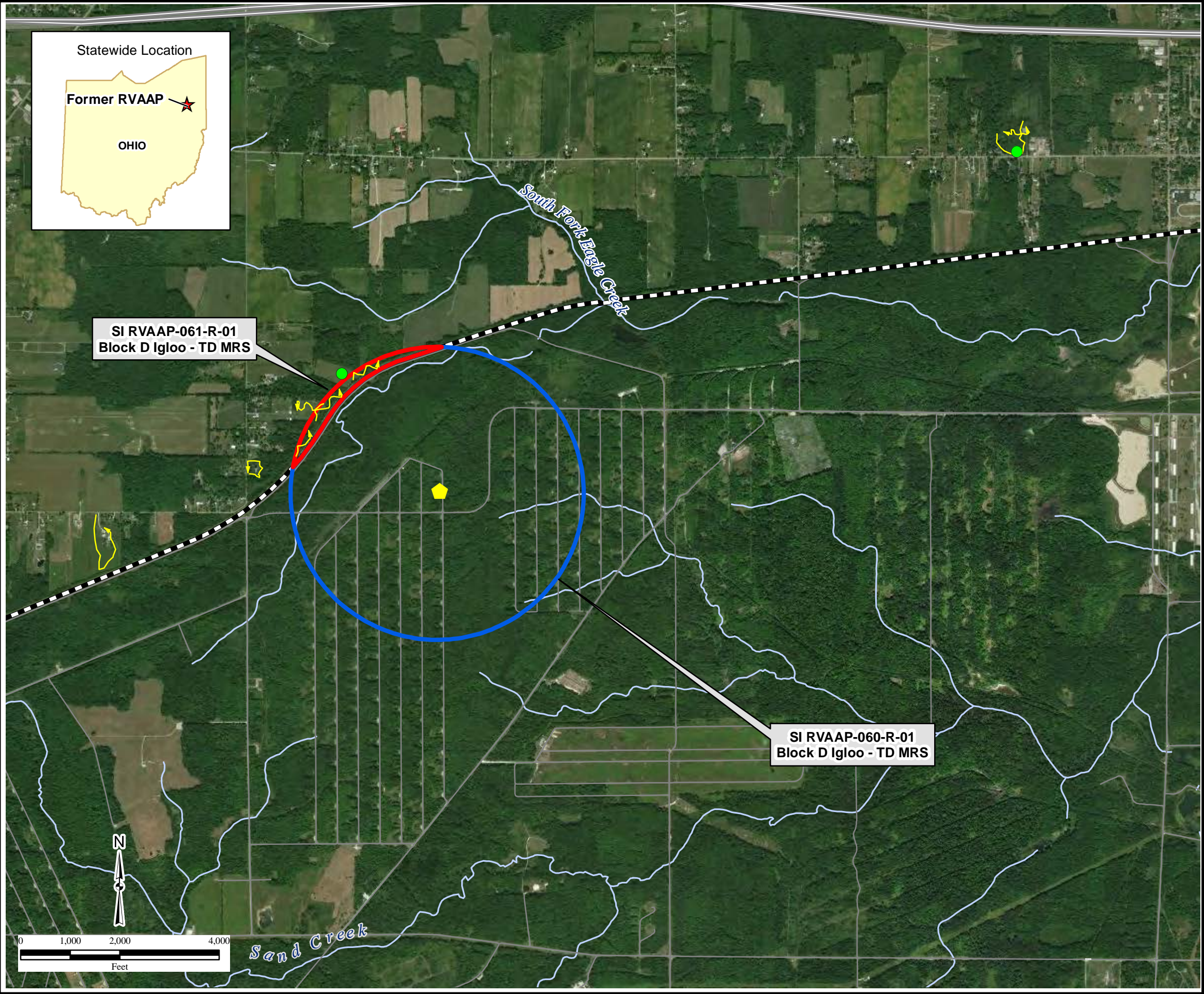
Notes:
MRS=munitions response site
RVAAP=Ravenna Army Ammunition Plant

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Figure 3
SI MRS Boundaries Map
Block D Igloo-TD MRS
Camp Ravenna/Former RVAAP
Portage/Trumbull Counties, Ohio



Legend

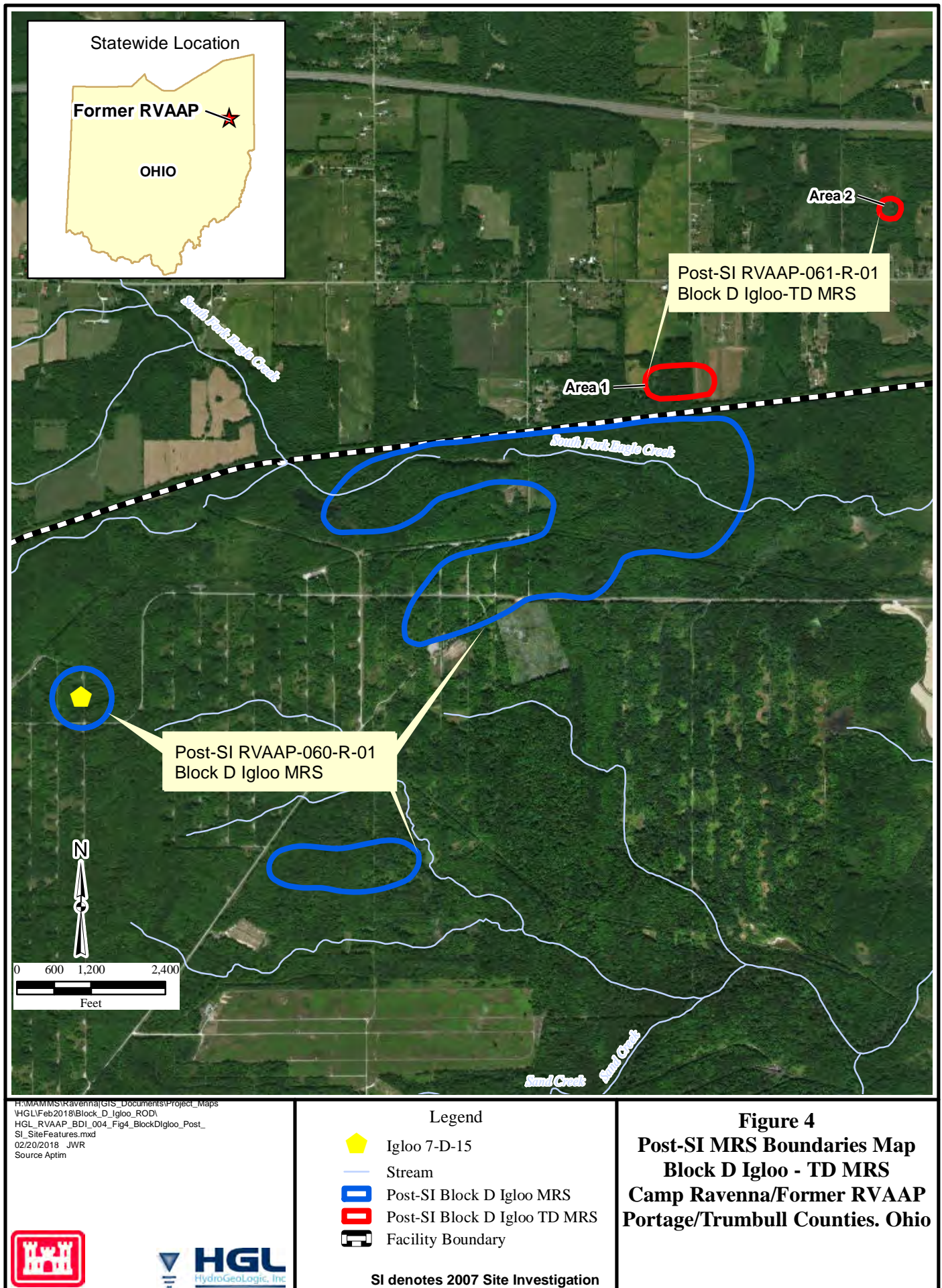
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- Igloo 7-D-15
- Pre-SI RVAAP-060-R-01
Block D Igloo -TD MRS
- Pre-SI RVAAP-061-R-01
Block D Igloo -TD MRS
- Facility Boundary
- Survey Transects
- Road
- Stream

Notes:
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RVAAP=Ravenna Army Ammunition Plant

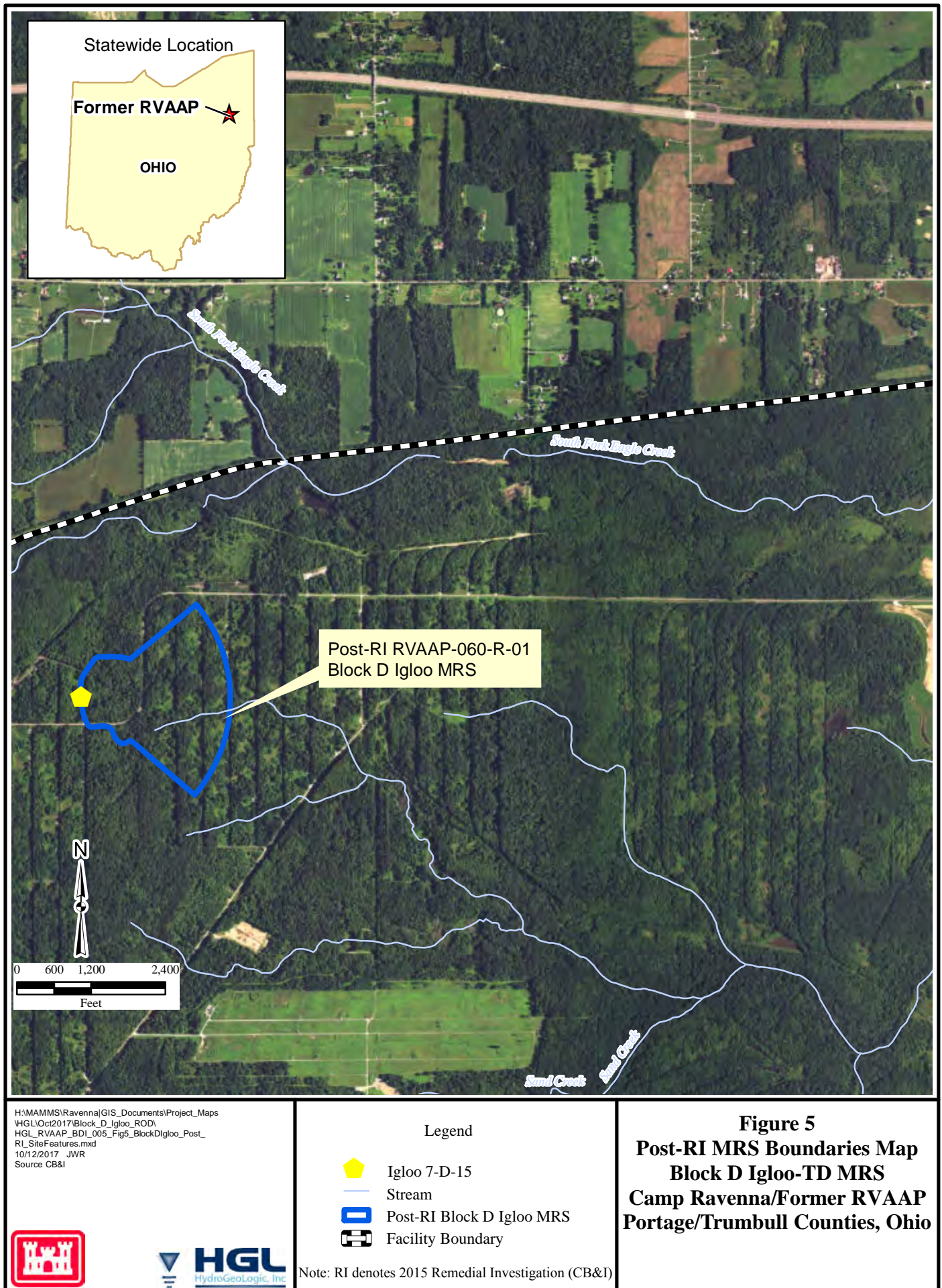
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Appendix A
Notice of Availability of the Proposed Plan

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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:
 Ramsdell 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 Ramsdell 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 6368 Rock Spring Road, Ravenna, Ohio 44266, 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.tait.nfg@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.

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) or call Katie Tait at 614-336-6136.

#295-2T - October 22 & 29, 2017 * #WOH0033481

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STATE OF OHIO

TRUMBULL COUNTY

SS: PAMELA EAZOR

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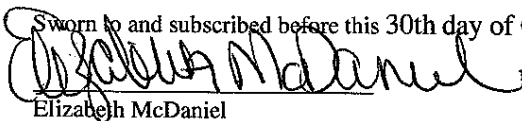
30 Record-Courier a newspaper printed and published in the city of Kent, and of General circulation in the County of Portage, State of Ohio, and personal knowledge of the facts herein stated and that the notice hereto annexed was Published in said newspapers for 2 insertions on the same day of the week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



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No. of Lines: 72

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

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Notary Public
Commission Expires June 19, 2021

