

**PUBLIC MEETING FOR
RVAAP-050-R-01 ATLAS SCRAP YARD
RVAAP-061-R-01 BLOCK D IGLOO TD
RVAAP-019-R-01 LANDFILL NORTH OF
WINKLEPECK RVAAP-001-R-02 RAMSDELL QUARRY
LANDFILL AREA 1 (NORTH)
MUNITIONS RESPONSE SITES**

Contract W912DR-15-D-0016
Delivery Order 0001



**US Army Corps
of Engineers®**

**U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT
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BALTIMORE, MARYLAND 21201**

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December 2017

REPORT DOCUMENTATION PAGE

*Form Approved
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14. ABSTRACT This draft public meeting memorandum describes the activities conducted, documents public attendance and public comment, and records details relevant to the public meeting held November 8, 2017. The Army National Guard conducted the public meeting, in consultation with the Ohio Environmental Protection Agency, to submit for public review and comments four Proposed Plans for munitions and explosives of concern and munitions constituents at four munitions response sites at the former Ravenna Army Ammunition Plant in Portage and Trumbull counties, Ohio: Ramsdell Quarry Landfill Area 1, North Atlas Scrap Yard, Landfill North of Winklepeck, and Block D Igloo-TD.					
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**Paid News Releases and
Affidavits of Publication**

News Release and Affidavit, 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 6366 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.nic@mell.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 Raed 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.

#255-2T - October 22 & 29, 2017 • #ACH-0033461

PROOF OF PUBLICATION

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News Release, Record Courier, 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

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Landfill North of Winklepeck
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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.

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

Proof of Publication

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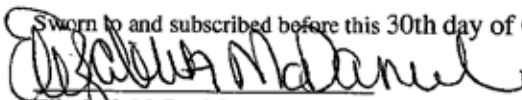
30 Record-Courier a newspaper printed and published in the city of Kent, and of General circulation in the County of Portage, State of Ohio, and personal knowledge of the facts herein stated and that the notice hereto annexed was Published in said newspapers for 2 insertions on the same day of the week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



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Elizabeth McDaniel
Notary Public
Commission Expires June 19, 2021

Public Meeting Sign-In Sheet

PUBLIC SIGN-IN SHEET

Ravenna Army Ammunition Plant Restoration Program
Proposed Plans Public Meeting
November 8, 2017

Name	Phone Number	Email
CRAIG COOMBS		
DAVID CRISP		
Kimberly Gross		
Kimberly Vaughn		
Katherine Kaye		
KEVIN SEDLAK		
Tina / Gary Lemley		
Mark Leys		
JAMES CROWLEY		
Barbara Crowley		
Nick Rogge		
Bob Princi		
Rod Beals		
Kathryn Tait		
Josephine Butler		

Slide Presentation

NO FURTHER ACTION PROPOSED PLANS FOR FOUR MUNITIONS RESPONSE SITES

RAMSDELL QUARRY LANDFILL MRS AREA 1, NORTH
ATLAS SCRAP YARD
LANDFILL NORTH OF WINKLEPECK
AND
BLOCK D IGLOO-TD

Presented by:
HydroGeoLogic, Inc.
November 8, 2017

"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."

File Name



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Presentation Agenda

- Summary of Military Munitions Response Program
- The presentation of each munitions response site (MRS) Proposed Plan will include the following:
 - ▶ Historical Operations and Investigations
 - ▶ Current Conditions
 - ▶ Remedial Investigation Results
 - ▶ Recommendations and Rationale for No Further Action
- Questions



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Acronym Cheat Sheet

AOC	Area of Concern
Camp	
Ravenna	Camp Ravenna Joint Military Training Center
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
MC	munitions constituents
MD	munitions debris
MEC	munitions and explosives of concern
MMRP	Military Munitions Response Program
MPPEH	material potentially presenting an explosive hazard
MRS	munitions response site
RVAAP	Former Ravenna Army Ammunition Plant



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Understanding the MMRP

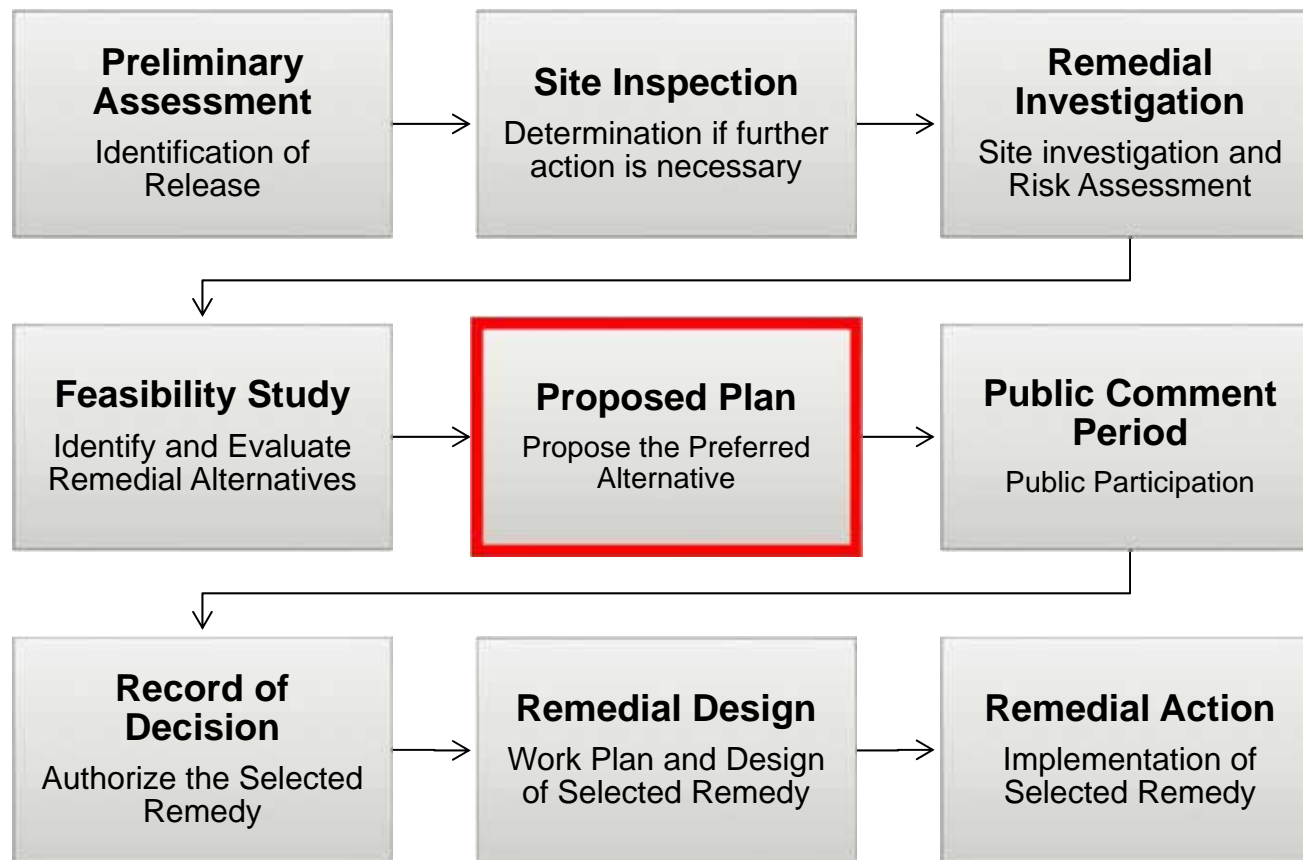
- The Military Munitions Response Program (MMRP) is a Department of Defense program
 - Follows the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or Superfund, process to address sites
 - These munitions response sites (MRS) are suspected or known to contain munitions and explosives of concern (MEC) and/or munitions constituents (MC)
- MEC may remain on an MRS due to former munitions-related activities:
 - Munitions firing training and testing
 - Munitions manufacturing or maintenance
 - Munitions destruction and disposal
- MC may be generated by munitions-related activities



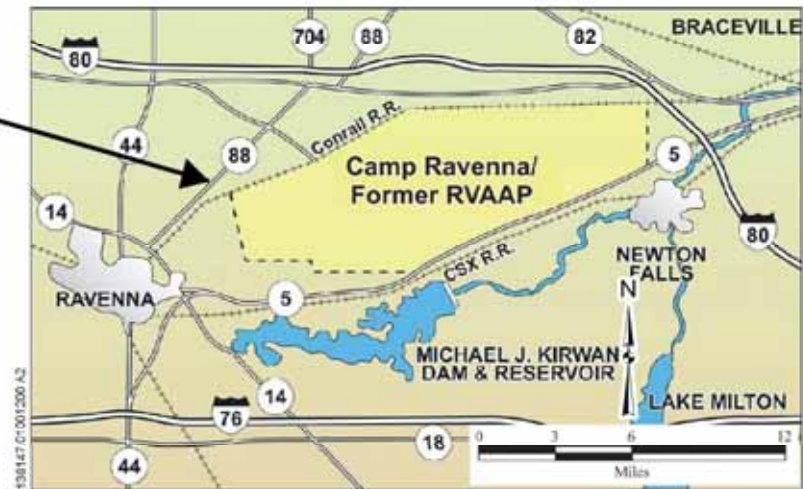
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The Stages of an MMRP Project



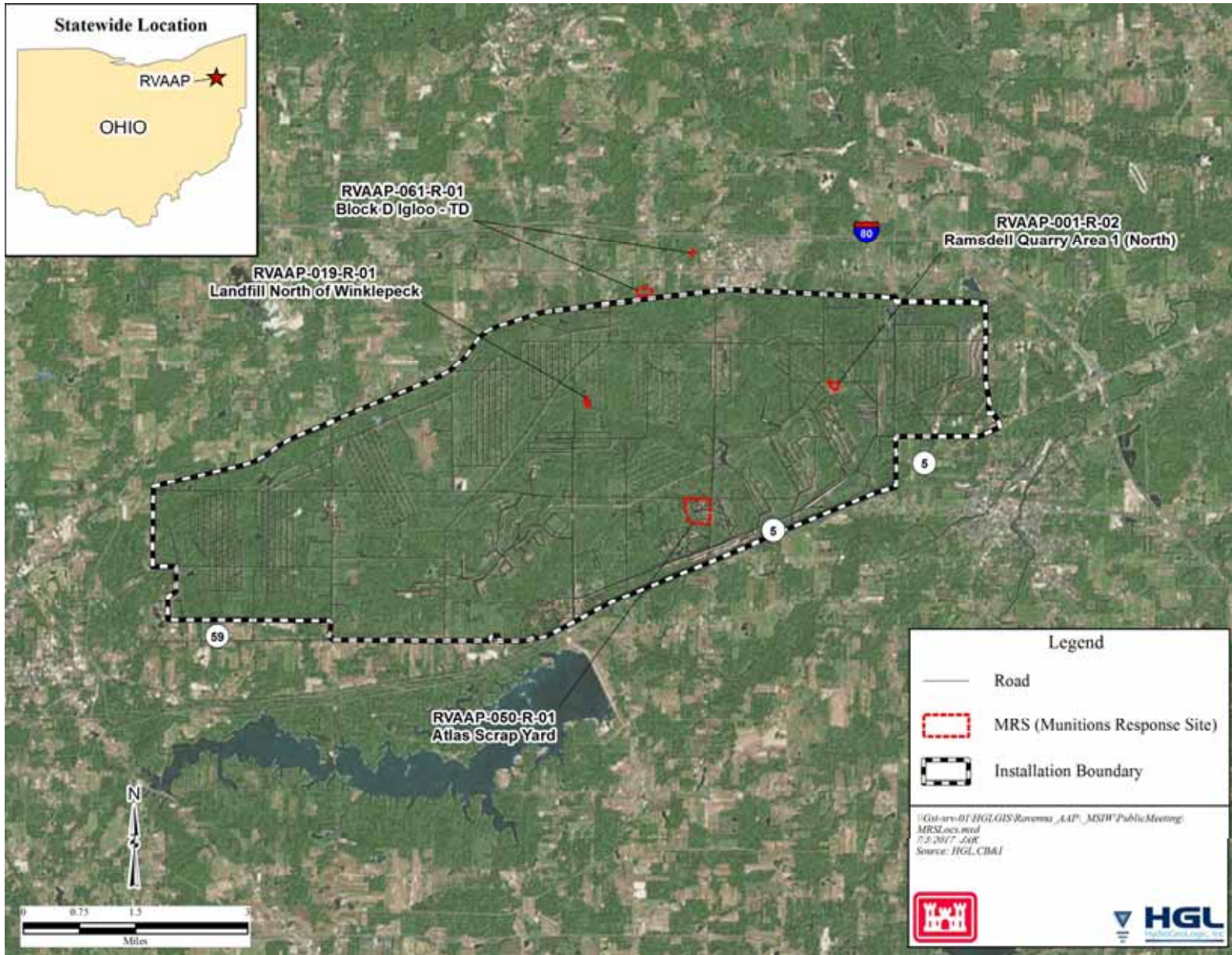
Former Ravenna Army Ammunition Plant Location



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Munitions Response Site Locations



Ramsdell Quarry Landfill MRS Area 1 (North)



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Historical Background

- The MRS is located within a former quarry that was initially mined for construction material such as gravel.
- The Ramsdell Quarry Landfill MRS was originally 13.43 acres and consisted of two areas:
 - **Area 1:** 6.5 acres and located in an old quarry bottom where open burning/open demolition operations of munitions occurred
 - **Area 2:** 6.93 acres located south of Area 1 composed of a small inactive soil borrow pit and wooded area that may have been used as a disposal area for the munitions treated in Area 1
- Quarry operations in Area 1 ceased in 1941
- 1946 to 1950 the quarry in Area 1 was used to burn waste explosives
- 18,000 500-pound incendiary or napalm bombs were burned on the surface of the former quarry bottom Area 1
- Beginning in 1970s, the quarry was used for landfilling activities
- The landfill is currently inactive and is an Area of Concern (AOC) under the Installation Restoration Program (IRP)



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Historical Investigations

- **2007, Historical Records Review**
 - Revised the MRS boundary to include Area 1 and Area 2
 - Recommended MRS for further characterization under MMRP
- **2008, Site Inspection**
 - Identified buried metallic items throughout the MRS
 - No intrusive investigation was conducted
 - No material potentially presenting an explosive hazard (MPPEH) was identified on the ground surface
 - No soil sampling activities were conducted; MC contamination being addressed for the AOC under the IRP
 - Determined that further investigation was necessary



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Ramsdell Quarry Area 1 (North) MRS Features

11



Legend

- RI MRS Boundary
- AOC Landfill Boundary
- Surface Water
- Wetland
- Approximate Landfill Boundary
- Former Soil Borrow Pit
- Railroad
- Fence Line

Note: Area 2 remained as RVAAP-001-R-01 following the Remedial Investigation and is a separate MRS from Area 1. Area 2 is not addressed in the No Further Action Proposed Plan.



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Current Conditions

- Ramsdell Quarry Landfill MRS Area 1 (North) is approximately 6.5 acres
 - Approximately 4 acres of moderate quality wetland are present
 - Collocated with IRP Ramsdell Quarry Landfill AOC
 - Perimeter of AOC secured by a fence or five-tension wires
 - MRS is located within AOC fence area
- Access to the AOC is authorized access only
- Controls currently in place include
 - Hazard briefing
 - Access tracking sheet sign-in
- No buildings or structures are present at the MRS



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Remedial Investigation

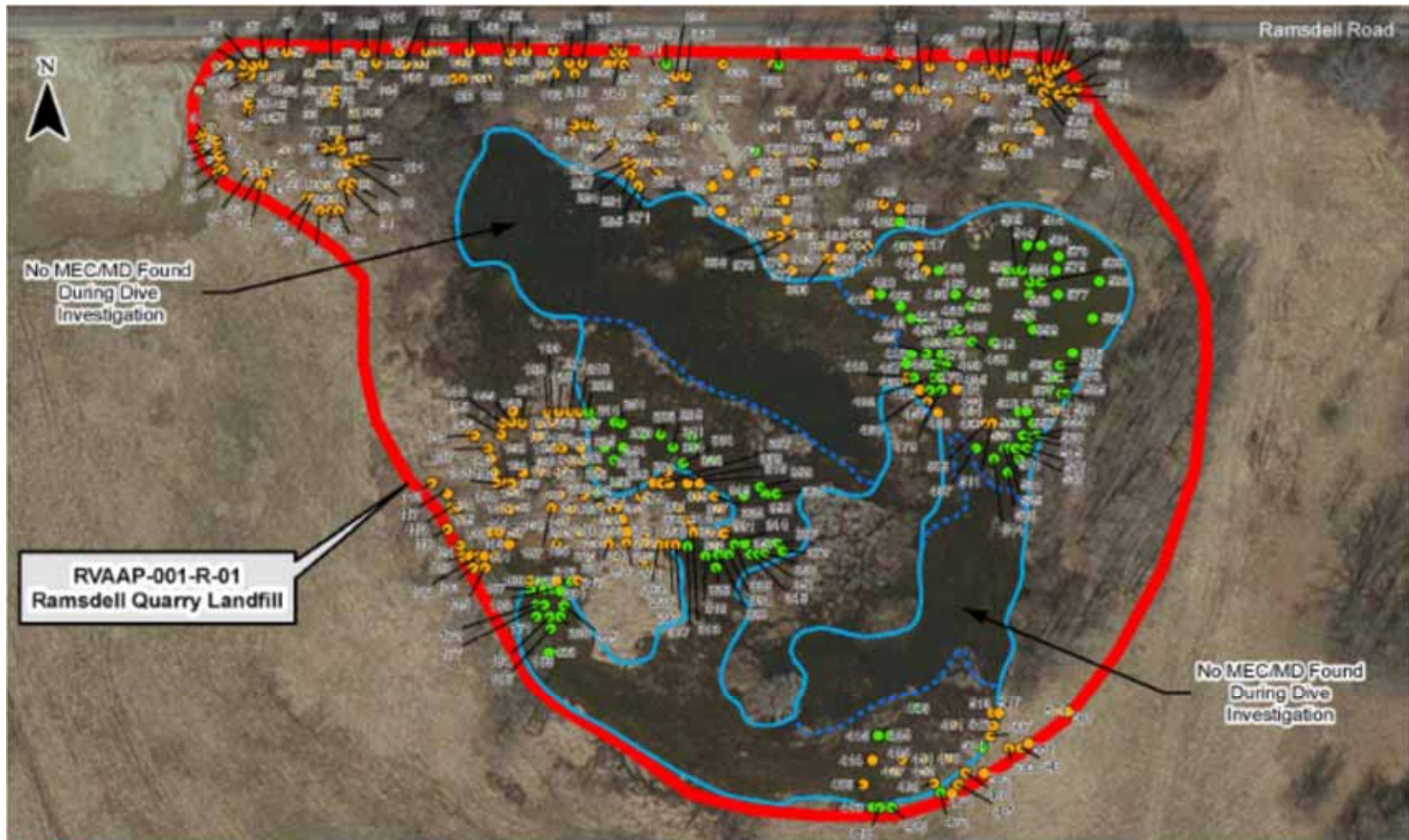
- Field work conducted in two phases
 - May through August 2011
 - August 2013
- Activities included
 - Digital geophysical mapping survey
 - Intrusive investigation of buried metallic items at the dry areas
 - Underwater investigation of the deep wetland areas



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Remedial Investigation Results



- | | | |
|---|---|---|
|  | MRS Area 1 Boundary | Anomalies Investigated |
|  | Approximate Areas with Deep Water (> 2 Ft) at Time of Intrusive Investigation (August 2013) |  Other Debris (non-munitions) |
|  | Approximate Areas with Deep Water (> 2 Ft) at Time of DGM Survey (May-August 2011) |  Anomaly Type Unknown (Inaccessible) |



Remedial Investigation Results

- No MPPEH was identified on the ground surface or in the underwater areas
- MC sampling was not warranted
- The Remedial Investigation fieldwork confirmed that an explosive hazard is not present at the MRS



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Recommendations

16

The preferred remedy must be protective of the receptors associated with current and future land use.

Current and future receptors: Camp Ravenna Security Guards
and Maintenance Workers

Current and future land use: Restricted Access (federal property licensed to the
Ohio Army National Guard)

The results of the Remedial Investigation fieldwork conducted at the Ramsdell Quarry Landfill MRS Area 1 (North) support the determination that NFA is the preferred remedy.



Atlas Scrap Yard MRS



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Historical Background

- The Atlas Scrap Yard MRS is located in the south-central portion of the former Ravenna Army Ammunition Plant (RVAAP)
- Used to house workers during the construction of the installation starting in 1940
- After World War II the buildings were demolished or moved to other locations on the RVAAP facility
- The MRS was used as a storage area and scrap yard for nonexplosive scrap material.



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Historical Investigations

19

- **2007, Historical Records Review**

- Described the discovery of an unidentified MEC item in the southwest corner of the MRS during a 2006 sampling event.
 - No supporting information describing the type or condition of the item
 - No documentation of its removal was provided

- **2008, Site Inspection**

- No MPPEH was identified
- Buried metallic items were detected in the east-central portion of the MRS
- After field work was completed, information about a suspected 40-mm burial area was received
- Determined that further investigation was necessary



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Current conditions

Atlas Scrap Yard MRS is approximately 66 acres

- Unpaved roads exist throughout the MRS
- No buildings or structures are present



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Atlas Scrap Yard MRS Features



Legend

-  Former Debris Area
-  IRP Area of Concern
-  MRS



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Remedial Investigation

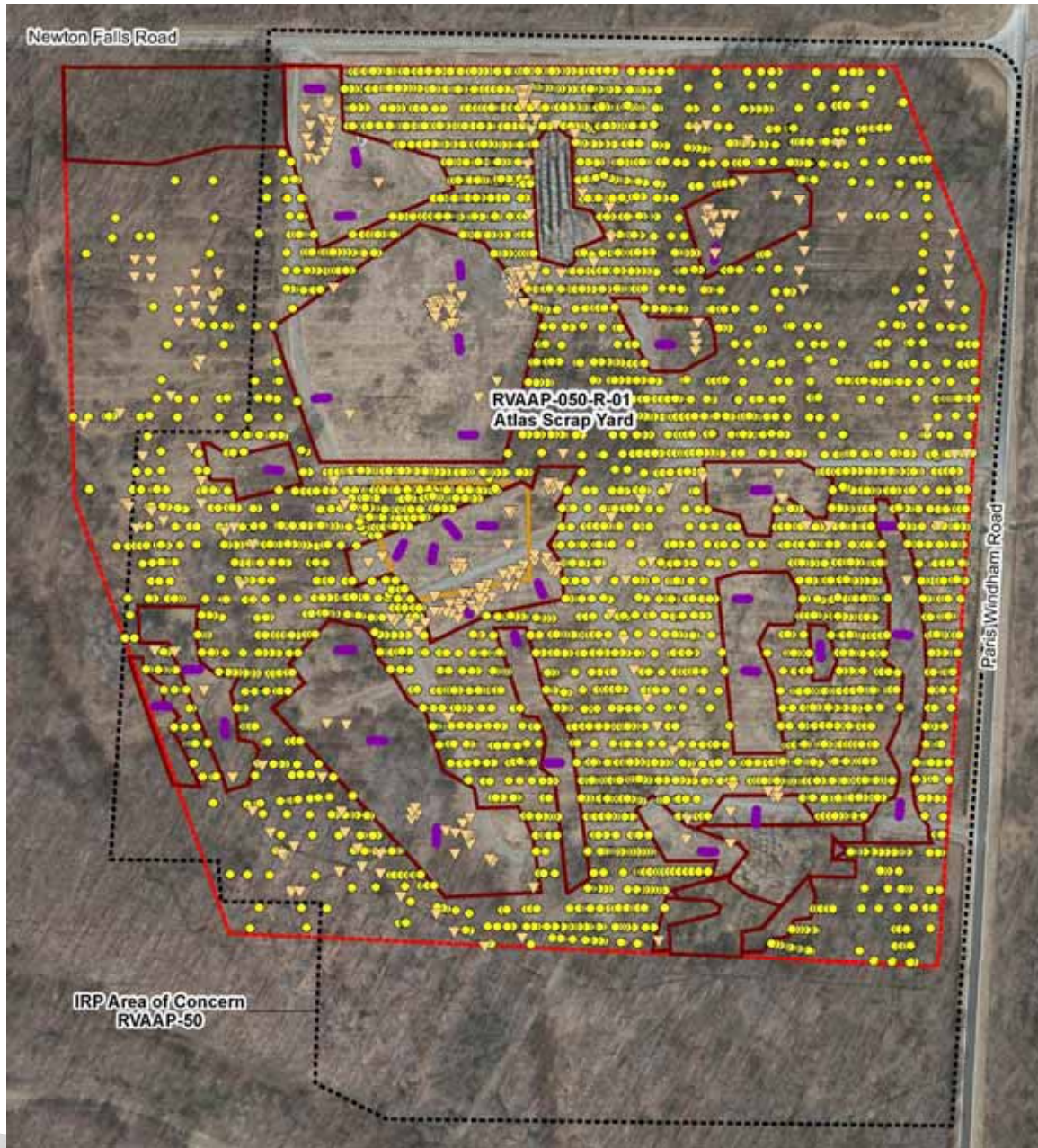
- Field work conducted between July and October 2011
- Activities included
 - Digital geophysical mapping survey
 - Intrusive investigation of buried metallic items



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Remedial Investigation Results



Legend

- Anomaly Location Investigated (No MEC or MD Items Identified)
- ▼ Cultural Feature/ Surface Metal/ Natural Site Feature
- Trench Ops Complete (33 Locations, No MEC or MD Items Identified)
- ▭ High Anomaly Density Area
- ▭ Suspected Location of Buried 40 mm Fragmentation Shell
- ▭ IRP Area of Concern
- ▭ MRS



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Remedial Investigation Results

- Non-munitions debris was identified from intrusive investigation areas
- No MPPEH was identified on the ground surface or subsurface
- MC sampling was not warranted
- The Remedial Investigation fieldwork confirmed that an explosive hazard is not present at the MRS



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Recommendations

The preferred remedy must be protective of the receptors associated with the current and future land use.

Current receptors: facility personnel, contractors, and occasional trespassers

Future receptors: facility personnel, contractors, occasional trespassers, and National Guard trainees

Current land use: maintenance activities, natural resource management, and environmental sampling

Future land use: Current land uses and Military Training

The results of the Remedial Investigation fieldwork conducted at the Atlas Scrap Yard MRS support the determination that NFA is the preferred remedy.



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Landfill North of Winklepeck



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Historical Background

- The Landfill North of Winklepeck MRS is located in the north-central portion Camp Ravenna
- The landfill was in operation between 1969 and 1976 accepting general RVAAP facility refuse, explosive waste residue, and open burn waste including flares and booster cups.
- The MRS overlaps with the inactive landfill
- The MRS was originally 14.05 acres in the north-central/north-eastern portion of the landfill
- The MRS was reduced to 2.32 acres during the Site Inspection



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Historical Investigations

28

- **2007, Historical Records Review**
 - Reported the MRS accepted RVAAP facility refuse, explosive residue, and munitions waste from open burn activities
 - Established the MRS originally as 14.05 acres
- **2008, Site Inspection**
 - Visual inspection identified munitions items that did not pose an explosive hazard
 - Two areas with buried metallic items identified
 - No intrusive investigation was conducted
 - Soil sample collected
 - Recommended the MRS to 2.32 acres
 - Recommended further investigation was necessary



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Current conditions

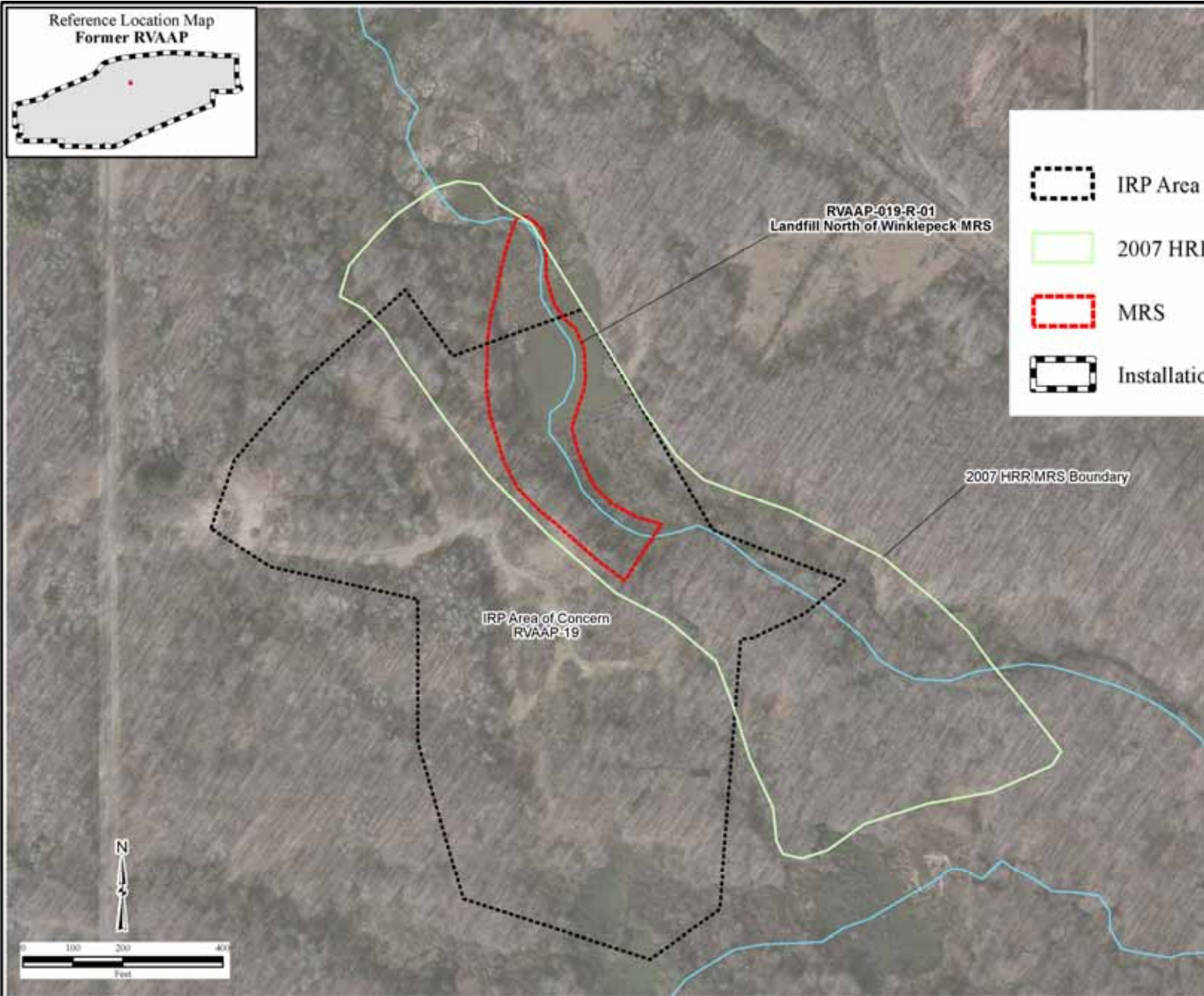
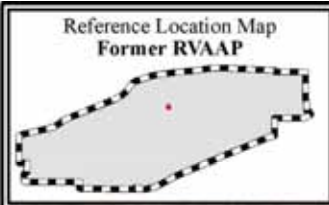
- The Landfill North of Winklepeck MRS is approximately 2.32 acres
- A wetlands area is located along the eastern boundary
- No buildings or structures are present within the MRS



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Landfill North of Winklepeck MRS Features



Legend

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



Remedial Investigation

- Field activities conducted in May and September 2011
- Activities included:
 - Instrument-assisted visual survey
 - Buried metallic items identified, but no intrusive investigations conducted
 - MC sampling not warranted



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Remedial Investigation Results

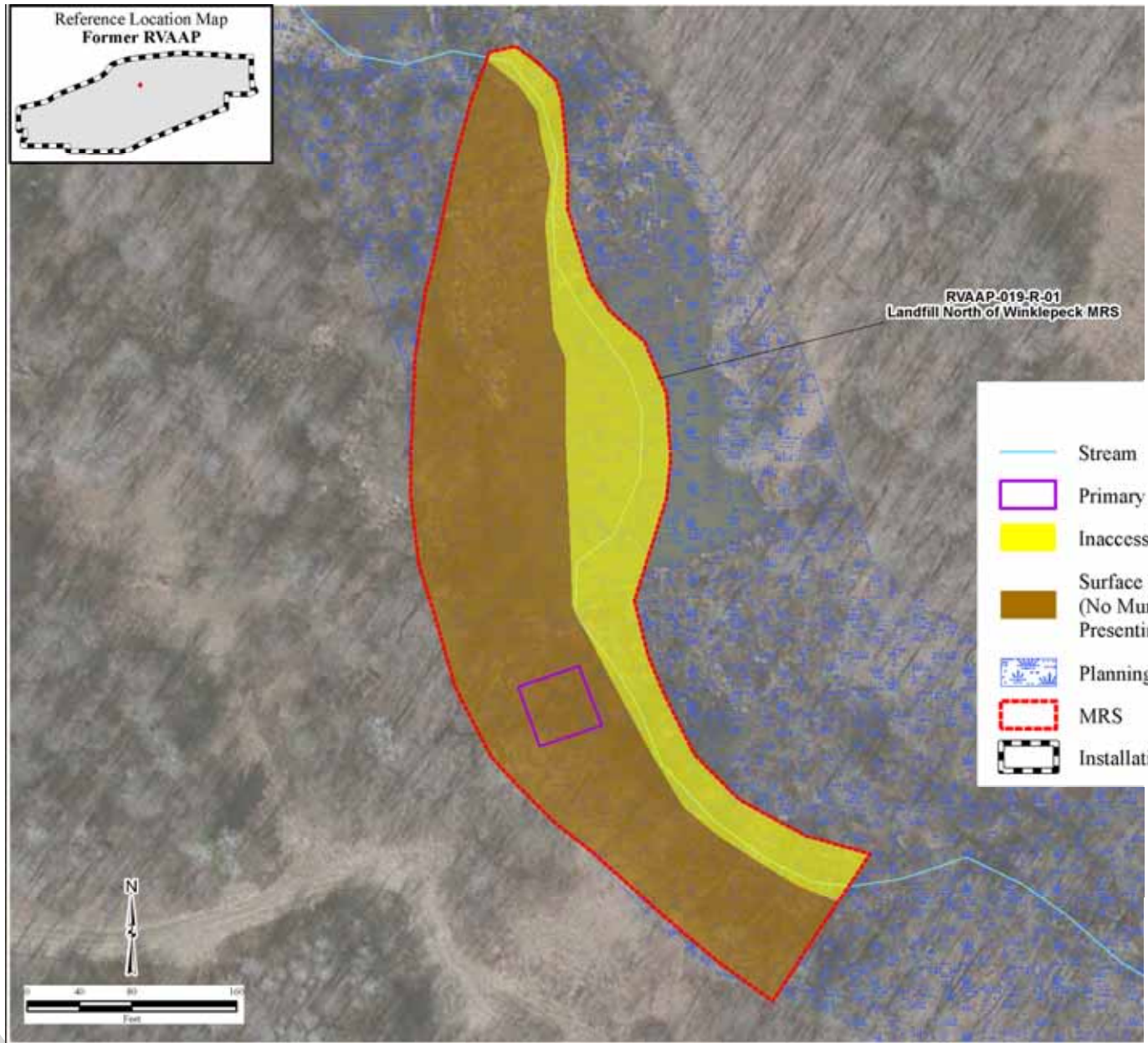
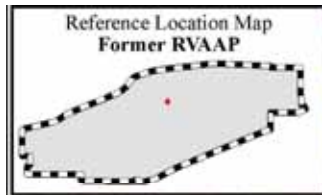
- Surface debris observed included empty 55-Gal drum and rusted cans
- Buried metallic items assumed to be similar to as surface debris; therefore, no intrusive investigation was conducted
- No MEC or MPPEH was identified
- The Remedial Investigation fieldwork confirmed that an explosive hazard is not present at the MRS



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Remedial Investigation Results



RVAAP-019-R-01
Landfill North of Winklepeck MRS

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
- Installation Boundary



Recommendations

The preferred remedy must be protective of the receptors associated with the current and future land use.

Current receptors: facility personnel, contractors, and occasional trespassers

Future receptors: facility personnel, contractors, occasional trespassers,
and National Guard Trainees

Current land use: maintenance activities, environmental sampling, and natural
resource management

Future land use: Current land uses and Military Training

The results of the Remedial Investigation fieldwork conducted at the Landfill North of Winklepeck MRS support the determination that NFA is the preferred remedy.



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Block D Igloo-TD MRS



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Historical Background

- The Block-D Igloo was used to store M-41 20-pound fragmentation bombs
- In March 1943, some bombs exploded as they were being placed inside, distributing concrete fragments up to 3,800-feet east
- The debris was initially estimated to cover 641.5 acres surrounding Block D Igloo:
 - 622.25 acres within the facility
 - 19.25 acres outside the facility
- The land usage at the time of the explosion for the 19.25 acres was residential, agricultural, with railroad tracks and a right-of-way present

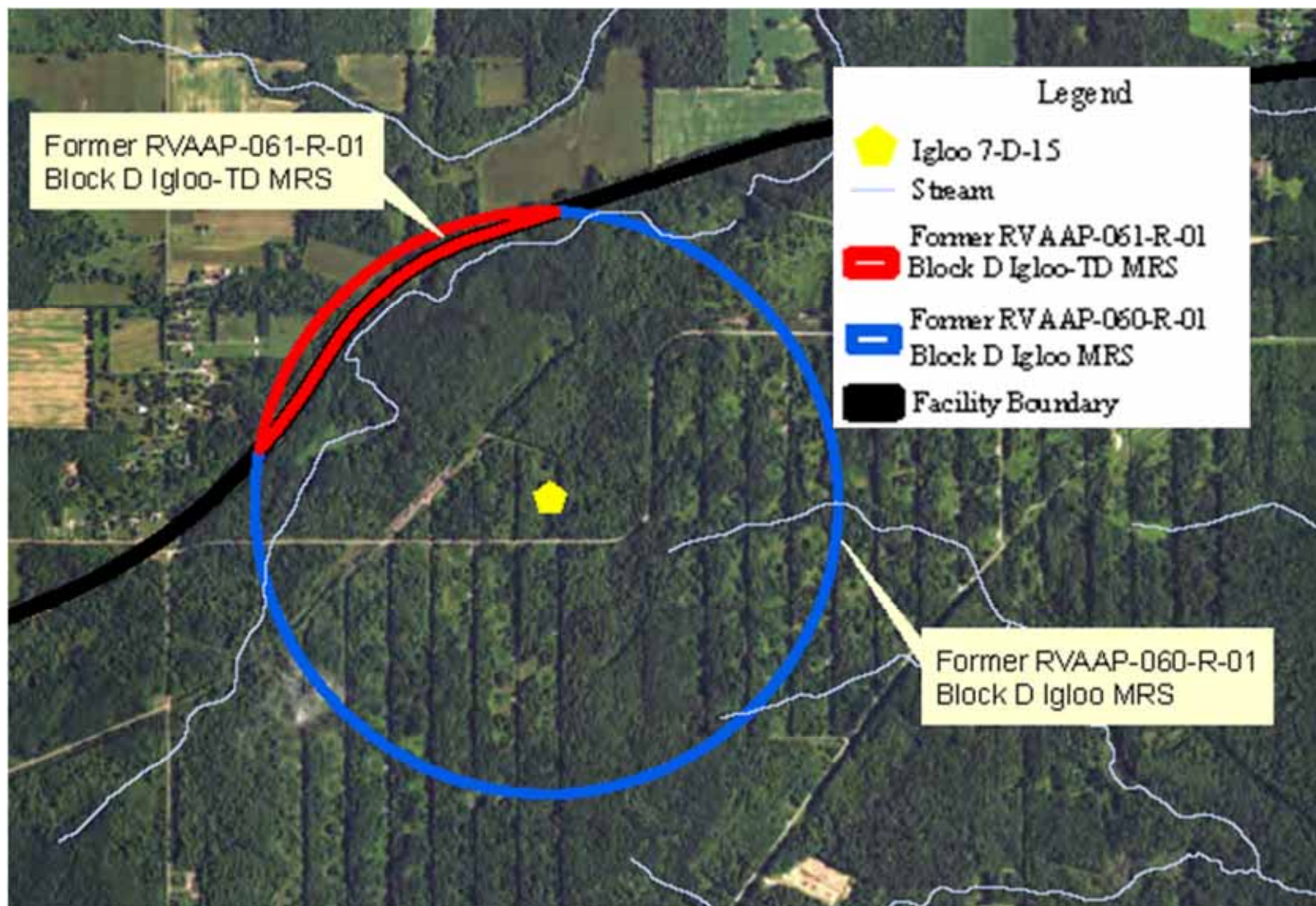


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Block D Igloo-TD MRS Pre-SI

37



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Historical Investigations

- **2007, Historical Records Review**

- Identified the 641.5 acres debris field as the MRS requiring further characterization
- Found historical records showing non-munitions debris (i.e., concrete) fragments locations that were not previously investigated
- Locations includes areas outside of the facility

- **2008, Site Inspection**

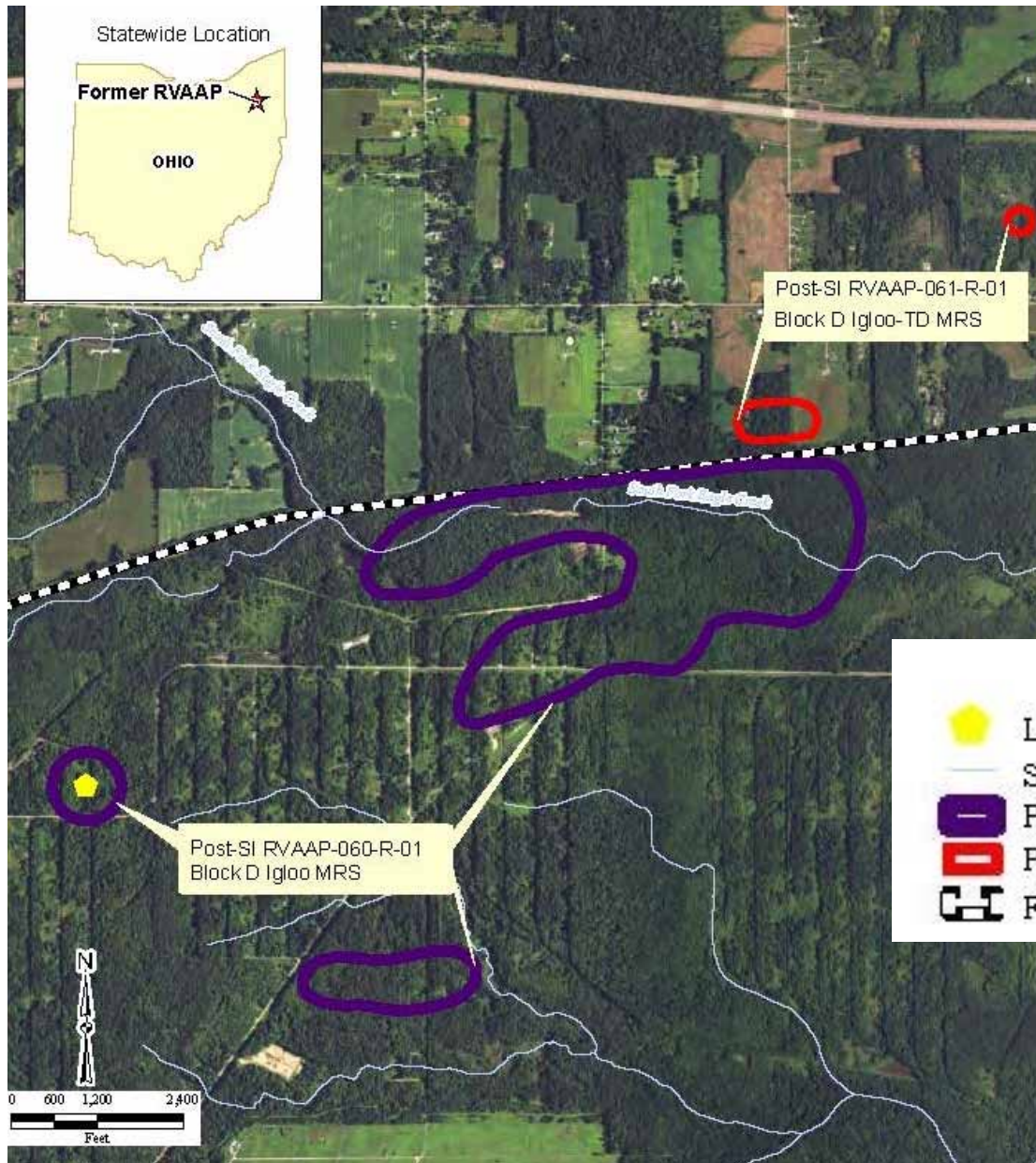
- No MPPEH or MC found at 19.25 acres Block D Igloo-TD MRS
- SI Report recommended investigation of two locations outside the facility where the non-munitions debris (i.e., concrete) were reported.
- The area of these two locations was 14.13 acres and was the revised Block D Igloo-TD MRS



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Block D Igloo-TD MRS Post-SI



Remedial Investigation

- During development of the Work Plan, the fragmentation distance that would have resulted from the 1943 explosion at Block D Igloo was reevaluated.
 - It was determined that no fragments could have traveled beyond the facility boundaries.
 - No Remedial Investigation field activities were conducted at the 14.13 acres (Block D Igloo-TD MRS) outside of the facility
- Instrument-assisted visual surveys and intrusive investigation were conducted at the Block D Igloo MRS (within the facility)
 - Surface MD found at a maximum horizontal distance of 1,800 feet from the Block D Igloo location



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Remedial Investigation Results

41

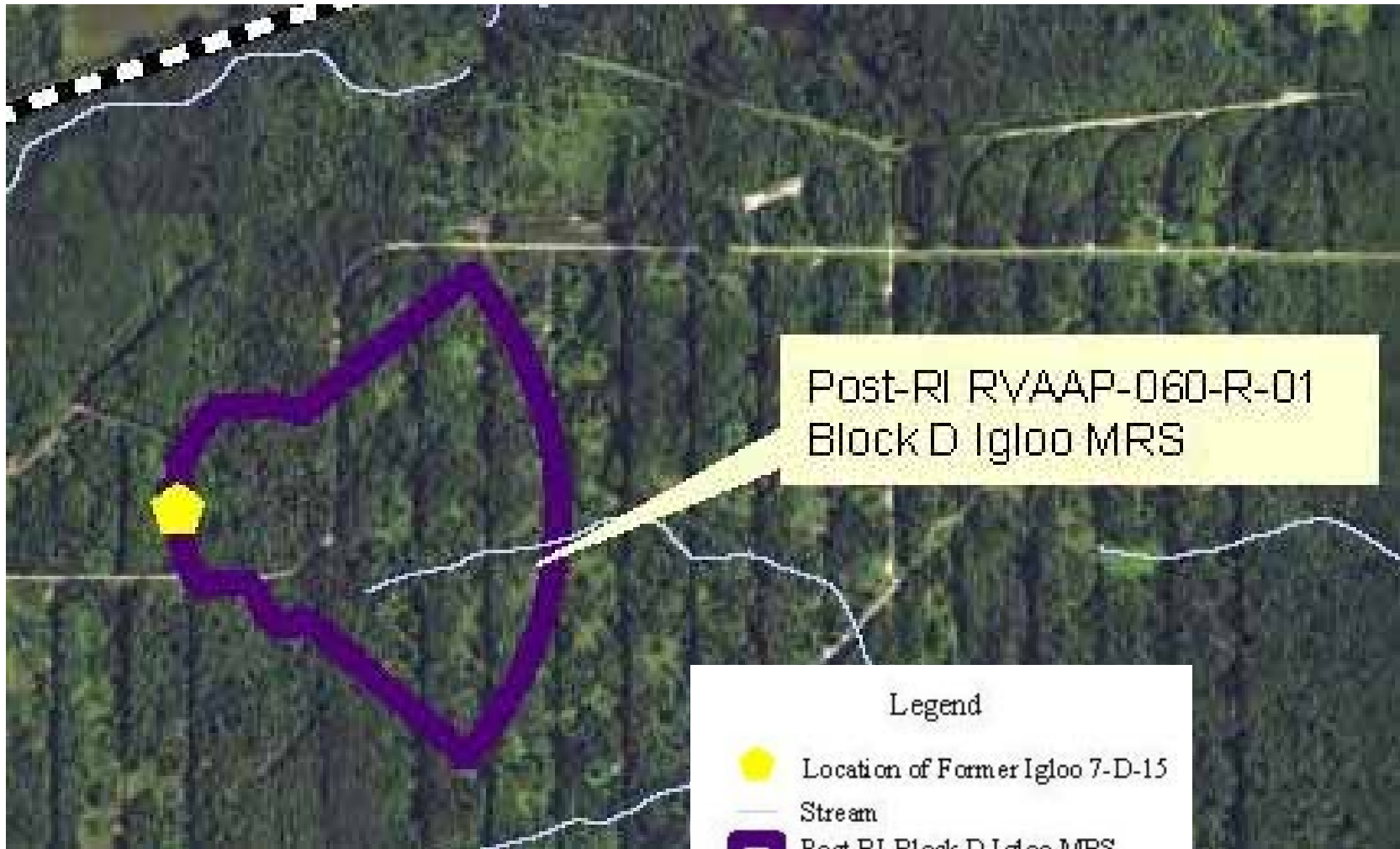
- The maximum horizontal distance of MD (1,800 feet) found during the Block D Igloo MRS investigation supports the revised fragmentation distance
- Results support the 14.13 acre Block D Igloo-TD MRS requires no further investigation.







US Army Corps
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Remedial Investigation Results 42



Legend

-  Location of Former Igloo 7-D-15
-  Stream
-  Post-RI Block D Igloo MRS
-  Facility Boundary



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Recommendations

The preferred remedy must be protective of the receptors associated with the current and future land use.

Current receptors: Residential receptors

Future receptors: Residential Receptors

Current land use: residential, recreational, and agricultural

Future land use: residential, recreational, and agricultural

The result of the Remedial Investigation fragmentation distance revaluation and the Remedial Investigation at the Block D Igloo MRS support the determination that NFA is the preferred remedy at the Block D Igloo-TD MRS.



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Questions?

Questions can be submitted several ways:

- In writing on the public comment forms provided for you
- By email (email address shown on the public comment forms)
- By mail (mailing address shown on the public comment forms)
- Asked in person at the public meeting

The public comment period began November 3, 2017 and continues through December 8, 2017



US Army Corps
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Public Meeting Transcripts

CHARLESTON TOWNSHIP

PUBLIC MEETING

IN RE:)
)
 MILITARY MUNITIONS)
 RESPONSE PROGRAM)
) TRANSCRIPT OF PROCEEDINGS
)

Transcript of Proceedings, on behalf of the US
 Army Corps of Engineers, Camp Ravenna, taken by the
 undersigned, Shannon Roberts, a Registered
 Professional Reporter and Notary Public in and for the
 State of Ohio, at the offices of Charleston Township
 Hall, 6368 Rock Spring Road, Ravenna, Ohio, on
 Wednesday, the 8th day of November, 2017, at 6:30 p.m.

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APPEARANCES:

Kimberly Vaughn, Senior Project Manager
David Crispo, APTIM
Nicholas Roope, Ohio EPA

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I N D E X

EXHIBITS (Marked)

None

- - - - -

1 MS. VAUGHN: Hello, everyone, and
2 welcome. Thank you so much for taking time
3 out of your evening to come out. We
4 appreciate -- I respect your concern and we
5 appreciate your time in coming here tonight.

6 On behalf of the US Army Corps of
7 Engineers, Camp Ravenna, welcome to our
8 public meeting. My name is Kimberly Vaughn.
9 I work for HydroGeoLogic. My company works
10 for the US Army Corps of Engineers in Camp
11 Ravenna. I'll be speaking for part of the
12 evening tonight. I'll be trading off with
13 David Crispo, also working for the Army Corps
14 in Camp Ravenna. He is with APTIM.

15 The folks in the room tonight, we have
16 people with a lot of knowledge and history
17 about Camp Ravenna. And we hope to, first,
18 give you some information about the four
19 sites we are talking about tonight, and then
20 have time at the end for questions and
21 answers, and respond to all of your concerns.

22 We have restrooms in the back here.
23 Please make sure -- the facility let us know
24 that we don't need to be blocking any of the
25 fire department's entrance and exits at their

1 building. Hopefully you saw those signs when
2 you were getting here today.

3 The discussion this evening -- and you
4 have hopefully picked up some copies of our
5 slide presentation. And it's my -- is my
6 volume okay? Am I -- okay. The slides and
7 the handouts that we got over here. And
8 please do sign in at the front desk, if you
9 haven't had a chance to sign in yet.

10 The agenda this evening, we'll be going
11 over four different munitions response sites.
12 And I'll slip into saying "MRS," that you see
13 in parentheses here. We do use a lot of
14 acronyms. I'll try not to slip into using
15 them, but I can't promise.

16 We are going over four munitions response
17 sites. We'll cover, for each of those sites,
18 the history, the current site conditions, the
19 remedial investigation results of the
20 investigation most recently done, and then
21 the evidence for a no further action
22 conclusion.

23 The similarity among all four of these
24 munitions response sites is that no further
25 action is indicated. And we are going to

1 present to you why tonight.

2 I do ask that you hold questions for our
3 slotted time at the end this evening. We
4 have a half hour or more. We'll be here for
5 questions. And that way the court reporter
6 is recording everything that's said. That's
7 part of what we are required to do under the
8 program we are working under.

9 So if you would, take notes. We have
10 some blank forms. Take some notes on your
11 questions. Maybe write down a slide number,
12 whatever you need. And then the reporter can
13 record your questions at the end. So I'd
14 appreciate it if you'd jot down any questions
15 and let us know at the end.

16 And I did talk about the acronyms that
17 we'll cover in your slide presentation
18 handout, if you grab that. We have got some
19 very common items that we talk about. I did
20 want to focus on munitions response sites. I
21 summarize briefly there.

22 And you will also hear David and I talk
23 about munitions debris, munitions and
24 explosives of concern, and then material
25 potentially presenting an explosive hazard.

1 And those are differentiated by the MPPEH.
2 That material, we don't know yet. It is
3 being discovered. It is not for sure if it
4 has an explosive hazard or not. If it has an
5 explosive hazard, it is a munitions and
6 explosives of concern. And if it is a piece
7 of munitions debris that does not have any
8 explosive hazard, just a piece or a fragment
9 of metal, we call it munitions debris.

10 And I'll try not to slip into just saying
11 MD or MEC, but I can't promise. We tend to
12 use those all the time in our work, and we
13 slip into that. But I'll try really hard
14 tonight.

15 So the program that we are working under
16 for these four munitions response sites is
17 the Military Munitions Response Program,
18 MMRP. It's a Department of Defense program,
19 and it follows the CERCLA guidance and
20 requirements. You may have familiarity with
21 CERCLA. You may have heard of it. It's
22 superfund sites. You'll hear it generally
23 called superfund sites.

24 But these are areas where the Department
25 of Defense-owned acreage did have evidence of

1 military munitions usage in the past. And it
2 becomes a munitions response site and goes
3 into the MMRP program.

4 So the acronyms that I introduced briefly
5 on this bottom half here, the munitions and
6 explosives of concerns, those are the items
7 that still -- that have an explosive hazard
8 that may remain on a munitions response site
9 from that previous Department of Defense
10 activity.

11 And then separate from that, you may hear
12 us mention munitions constituents. And
13 that's more of the components of the part of
14 the munitions that might have actually
15 leached out into soil. And we'll talk about
16 that more for all four of these sites
17 tonight. They are not a concern at any of
18 these four. But we'll go into more detail
19 about those.

20 So the different phases of a Military
21 Munitions Response Program project, we are at
22 the proposed point plan phase -- the proposed
23 plan phase. So we have copies of those
24 proposed plans that you all can take with you
25 when you leave.

1 So you'll see that before that phase,
2 proposed plan, you have got other assessments
3 that are done, inspections and investigations
4 that are done. And we'll summarize the
5 details of each of those for all four of the
6 sites. And each of these phases has their
7 own sets of, you know, requirements and
8 guidance that we follow.

9 So general location of the former Ravenna
10 Army ammunition plant, currently Camp
11 Ravenna, this is where we are located within.
12 The meeting tonight is down here just north
13 of 5, or Ravenna-Warren Boulevard, if you
14 drove in from -- from elsewhere. Now, you
15 may live at a different area.

16 The four sites that we are talking about
17 today -- and these figures were also provided
18 in the handouts. They are probably easier to
19 see in attachments in the handouts, or in the
20 proposed plan, and it will appear on the
21 front.

22 And, Catherine, we had talked about maybe
23 turning off a half of a bank of lights. I
24 think that may help with the visibility.
25 Half of the room is on one light switch, and

1 we'll see if the darkness helps any.

2 So the four sites -- and, again, there
3 will be a figure within the proposed plans,
4 available to you over here, that shows each
5 of the four sites. But we have got Block D
6 Igloo Transferred to the north, actually
7 outside the boundary, Landfill North of
8 Winklepeck, the Atlas Scrap Yard, and then
9 the Ramsdell Quarry Area 1, North.

10 And, actually, that's really all of the
11 introductory information. David Crispo, who
12 has a lot of history at all of these sites,
13 as well, will be swapping off with me. And
14 I'll welcome David.

15 MR. CRISPO: Thank you very much. Good
16 evening, everyone. My name is David Crispo,
17 and I am the project manager for APTIM.

18 THE REPORTER: Excuse me.

19 MR. CRISPO: As Kimberly mentioned, I do
20 have some significant background with these
21 sites with my former company --

22 THE REPORTER: David, can you please slow
23 down?

24 MR. CRISPO: Sorry. Sorry.

25 First, I'd like to mention I'm from the

1 Boston area, and I talk very fast.

2 MS. VAUGHN: And I'm from Texas, but I'm
3 going to talk a lot slower today.

4 MR. CRISPO: And if you can't understand
5 me and if I'm talking too fast, just let me
6 know. And you just did. So I'll slow down.

7 So I do have some significant background
8 associated with these sites. I have been
9 working on it close to ten years now, and
10 it's good to be assisting HGL. At least,
11 that's where we are at.

12 So the first site we want to talk about
13 tonight is the Ramsdell Quarry Landfill MRS
14 Area 1, North, otherwise referred to as "Area
15 1." And historical background -- see if I
16 can figure this out. Here we go. So the
17 historical background associated with this
18 site is that it is the location of a former
19 quarry. It was initially mined for
20 construction materials, such as gravel. And
21 it was also used for materials such as
22 construction ballast for roadways, and I
23 think it was also used for some materials
24 that we used to construct the former RVAAP.

25 The Ramsdell Quarry Landfill MRS, during

1 the remedial investigation stage, which was
2 probably -- which was the last investigation
3 phase that was conducted for the site, was
4 originally 2 acres -- excuse me, it was
5 originally two different sites, Area 1 and
6 Area 2, that consisted of approximately 13.43
7 acres.

8 Area 1 is the focus of the discussion
9 tonight. These two sites have since been
10 separated for our remedial investigation. So
11 Area 2 is a topic for another night. But I
12 will focus on it briefly, just to -- because
13 it does have relevance to the topic.

14 Area 1 is an approximately 6.5-acre area,
15 and it's located at the bottom of the former
16 quarry. And it's an area where open burning
17 or open demolition, also known as OB/OD, of
18 munitions occurred.

19 Area 2 is located to the south of Area 1.
20 It's approximately a 7-acre site. It's
21 composed of a small, inactive soil borrow
22 pit, and it's a wooded area. And the area is
23 significantly wooded. And the reason why
24 that this site was considered to be a
25 munitions response site is that former Camp

1 Ravenna personnel had actually seen munitions
2 debris on top of the ground surface, and it
3 was expected that the -- that this site may
4 have been a disposal area for the activities
5 that were conducted at Area 1.

6 So in -- so the Quarry operations at Area
7 1 ceased in 1941, before the -- the former
8 RVAAP was constructed. From 1946, when the
9 RVAAP was in operation, Area 1 was used
10 for -- to burn waste explosives. Those waste
11 explosives included up to 18,000 500-pound
12 incendiary or napalm bombs. And the way they
13 were burned is they just burned them directly
14 on the -- on ground surface, the exposed
15 bedrock surface at the bottom of the quarry.

16 And then in the beginning of the 1970s, a
17 portion of the bottom of the quarry started
18 to be used as a landfill. And that landfill
19 was used until the early 1990s, until it
20 became inactive. That area -- and the
21 relevance of this landfill is that it is now
22 considered an area of concern under the
23 installation response program.

24 So what we have going on at this site is
25 we actually have an area of concern under the

1 installation response program, and then we
2 have a munitions response site under the
3 Military Munitions Response Program. So we
4 have two collocated sites here. And the
5 relevance of this area of concern impacts the
6 access issues associated with this site,
7 which I'll discuss in the next couple of
8 slides.

9 Is that right? Okay.

10 So for each munitions response site that
11 we are going to talk about tonight, there
12 were three -- I guess we'll call them data
13 collection mechanisms, as part of the CERCLA
14 process that we utilize. We have the
15 historical records review. We have the site
16 inspection. And then we have the remedial
17 investigation.

18 Now, historical records review is just
19 that, basically an evaluation of any type of
20 background data that you might find. You use
21 that information to make a determination on
22 whether or not that -- on whether or not that
23 site or MRS should proceed further under the
24 MMRP.

25 In the case of the Ramsdell Quarry MRS,

1 it was considered that Area -- Area 1 and
2 Area 2 be combined, based on historical
3 activities that occurred at the site, as well
4 as the proximity of those sites being closely
5 located to one another.

6 So based on that, the entire MRS, both
7 Area 1 and Area 2, were recommended for
8 further characterization under the MMRP
9 program for a site inspection.

10 So the site inspection was conducted at
11 the site in 2008. And the site inspections
12 that were conducted, I wouldn't call them
13 cursory, but they weren't as intrusive as a
14 remedial investigation. So at this site,
15 they conducted a -- a digital geophysical
16 mapping survey; basically, an investigation
17 for metallic objects below the ground
18 surface.

19 They also did a visual survey to evaluate
20 if there was -- here is an acronym we'll try
21 not to use -- MPPEH, otherwise known as
22 material potentially presenting explosive
23 hazard, on the ground surface. Now, the
24 results of that investigation were that they
25 did find various metallic objects beneath the

1 ground, but they did not investigate during
2 the site inspection. They also did not find
3 any particular types of MPPEH directly on the
4 ground surface.

5 So -- and, typically, for -- during a
6 site inspection, they'll collect samples for,
7 as Kimberly mentioned, MC, or munitions
8 constituents. In the case for this site,
9 being a collocated AOC, and having the
10 landfill being addressed under the IRP, any
11 type of contaminants at that time were to be
12 addressed directly under the IRP. Therefore,
13 no sampling was required to be conducted or
14 planned to be conducted at that site under
15 the -- as part of the site inspection. So,
16 therefore, no samples were collected at that
17 time.

18 But based on the -- based on the results
19 of the site inspection, the site was
20 recommended to move forward for remedial
21 investigation, and that was based primarily
22 on the various metallic objects that were
23 found, but were not obtrusively investigated.

24 So this is a figure depicting both Area 1
25 and Area 2 that were included as part of the

1 remedial investigation. You can see Area 2
2 is located at the southern portion of this
3 figure, underneath a -- I have a little
4 pointer here. That's actually a former rail
5 bed. You can't see that. But you can see
6 that it's definitely located outside of this
7 area, which is the disturbed area, which was
8 the -- the former quarry area.

9 So items to -- at the upper part of the
10 figure, you can see Area 1. This is the
11 rounded area right there. And then south of
12 that, some of the features are the -- you can
13 see the black, dotted area is the inactive
14 landfill.

15 And then you'll see the black outline
16 here that goes around in this direction right
17 here, that's actually the AOC boundaries.
18 And you can see if the MRS is actually
19 located within the AOC, which -- which I'll
20 discuss in a few minutes regarding the access
21 restrictions that protect -- that protect
22 this MRS.

23 Other features to note, you'll see in the
24 middle, because of the raised elevation of
25 the landfill, a lot of the water, a lot of

1 the surface water, as well as probably some
2 of the groundwater, leaches into the
3 depressed area that is now Area 1. So you
4 have areas of wetlands, as well as
5 desaturated areas.

6 And then, lastly, you'll see the northern
7 portion of the site is Ramsdell Road, and
8 that's how you would access the site. There
9 are actually several access points through a
10 gateway into the collocated AOC area.

11 So the current conditions at this site is
12 that the AOC -- that the MRS Area 1 is
13 approximately 6.5 acres. There are
14 approximately 4 acres of what is classified
15 as moderate quality wetland areas. The site
16 is collocated with a -- with the Ramsdell
17 Quarry Landfill AOC that is monitored under
18 the IRP. The perimeter of the AOC is secured
19 by a fence and a five-tension wire system.

20 The area along Ramsdell Road is the --
21 the point of the area where you'll find a
22 chain link fence. Then the rest of the
23 perimeter of the MRS -- excuse me, of the AOC
24 is protected with a five-tension wire system.
25 And then, again, the MRS is obviously located

1 within the AOC or within the fenced area of
2 the AOC.

3 And because the MRS is located within
4 that boundary, the MRS included restricted --
5 MRS is considered a restricted access area.
6 So, in other words, the only way to get into
7 the MRS is to conduct a hazard briefing and
8 sign a tracking sheet. And there are
9 currently no buildings, structures, or any
10 type of infrastructures or utilities at the
11 MRS.

12 So, anyway, proceeding to remedial
13 investigation; so following the site
14 inspection, the recommendation was for Area 1
15 to proceed to a remedial investigation. The
16 fieldwork at the MRS was conducted in two
17 phases; the first phase was May through
18 August 2011, and then the second one was
19 conducted in August 2013.

20 The activities conducted through the
21 first phase included a digital geophysical
22 mapping survey, and then as well as an
23 underwater investigation of the deep wetland
24 areas. Now, some of the water areas in this
25 MRS were as deep as 8 feet. And the

1 investigation required the use of special
2 diving personnel, as well as diving
3 equipment, to actually go in and investigate
4 these deep water areas.

5 The second phase of the investigation, in
6 August 2013, was when the intrusive
7 investigations, for the buried items
8 identified during the digital geophysical
9 mapping survey were -- were identified, those
10 were conducted.

11 So this figure right here shows Area 1,
12 and it shows the location of the buried
13 metallic items that were identified during
14 the remedial investigation. A total of about
15 700 anomalies or -- or metallic items
16 identified.

17 Unfortunately, between the first and the
18 second phase, between 2011 and 2013, the
19 water levels at the MRS had risen
20 significantly. So the Army was not able to
21 investigate all of the anomalies, however,
22 they were able to investigate approximately
23 75 percent of them. But of all the anomalies
24 that they -- or targets that they did
25 investigate, none of them were found to

1 contain any type of munitions related items,
2 any type of explosive concerns, or any
3 munitions debris. So the items that they
4 found consisted mostly of solid waste scrap
5 metal and just general construction debris.

6 So here are the results of the remedial
7 investigation that was conducted at the MRS.
8 No material potential -- potentially
9 presenting explosive hazard was identified on
10 the ground surface or any of the water areas.
11 And because there was no MPPEH, there was no
12 potential source for a -- for munitions
13 constituents, so, therefore, MC sampling was
14 not required. And, therefore, the results of
15 the RI fieldwork confirmed that an explosive
16 hazard is not present at the MRS.

17 So as we discussed, each of these
18 munitions response sites tonight, the
19 proposed plan for each of them, the preferred
20 remedy in the proposed plans must be
21 protective of the receptors associated with
22 the current and future land use.

23 The current and future receptors
24 associated with this site are the facility
25 security guards and maintenance workers. And

1 these are people that are actually accessing
2 the site, mostly to -- to deal with the
3 landfill; not necessarily the MRS. However,
4 the -- and, unfortunately, the M -- I'm
5 sorry. The MRS is actually located within
6 the boundaries. So that the -- so the -- the
7 current and future receptors for the AOC are
8 also the same for the MRS.

9 And the current and future land use will
10 remain -- will remain as a restricted access,
11 and that is to be protective of the landfill
12 and MRS that's at the site.

13 So, therefore, the results of the MRS
14 fieldwork conducted at the Ramsdell Quarry
15 Landfill, MRS Area 1, North, support the
16 determination that NFA is the preferred and
17 appropriate remedy for this MRS.

18 And the next site is Atlas Scrap Yard
19 MRS, that Kimberly will discuss.

20 MS. VAUGHN: We're going back and forth,
21 but I'll run through two of the sites, the
22 second and third sites, and then Dave will
23 finish us off before questions.

24 So Atlas Scrap Yard munitions response
25 site, if you pull -- picked up a copy of that

1 proposed plan, you can look at the figures in
2 there. We'll look at some figures on slides.
3 They might be more clear in a paper copy of
4 it.

5 First, we'll go through the history of
6 this munitions response site. On the
7 south-central portion of Camp Ravenna, it was
8 actually a construction camp for housing for
9 the workers. Then after World War II, some
10 metal scrap and some different construction
11 debris were piled there for a while. Those
12 debris piles have since been removed and they
13 are no longer present.

14 So as part of those stages of a military
15 munitions response project, the historical
16 records review, as Dave described, is the
17 background data, and any records on this
18 facility are reviewed to look for
19 information, whether munitions were used.

20 And one historical record did describe an
21 unidentified munitions and explosives of
22 concern item. There was nothing else in the
23 record saying, you know, what that was or
24 where it was found or exactly what type of
25 munition it might be. But that one record

1 identified did state that it might have an
2 explosive hazard. That was enough to keep
3 this MRS in the MMRP program as potentially
4 having explosive hazards.

5 And the next phase was a site inspection.
6 As part of that site inspection, evidence
7 that some buried metal may be on site. A
8 site inspection does not actually do any
9 digging. It just does some visual surveying,
10 instrument surveying on the surface. And
11 some areas with buried metal were identified.

12 There was also information that possibly
13 a burial area might exist on the Atlas Scrap
14 Yard MRS. So that site inspection did
15 recommend it move to the further phase or the
16 next phase of an MMRP project.

17 So that brings us to the current
18 conditions at the Atlas Scrap Yard MRS,
19 moving into the remedial investigation
20 results. There are unpaved roads throughout
21 this MRS. No buildings or structures are
22 present. And there are no construction
23 debris piles present any longer on this MRS.

24 And on figure 3 -- I believe it's figure
25 3. If you grabbed a copy of the proposed

1 plan, it may show up better there for you to
2 be viewable. The red boundary shown is the
3 munitions response site boundary. And this
4 MRS also overlaps with a black dash boundary
5 shown, which is the installation restoration
6 program area of concern. And that's under
7 another program being investigated under a
8 different set of guidelines and requirements.
9 You know, what we are covering here today are
10 the presence or lack of munitions.

11 So those were the site conditions moving
12 into the remedial investigation. Fieldwork
13 was conducted. Those activities did include
14 some digital geophysical mapping, which I
15 know Dave has already kind of introduced.
16 That is a geophysical survey that's done down
17 into the subsurface, to determine whether
18 there is any buried metal. Now, that survey
19 itself doesn't tell you what the metal is
20 until you have gone and literally dug it up
21 and found out what that piece of metal may
22 be. So we are calling that intrusive
23 investigation, which is just a very fancy way
24 to say digging.

25 So on this figure 5 -- this is figure 5

1 from your proposed plan. It may be a little
2 more clear. This figure is showing what the
3 results of all that digging, as part of the
4 remedial investigation, determined.

5 And you might note there are several
6 different symbols on the figure, and an
7 anomaly location, and the yellow circle,
8 which is a point that was dug; you know, one
9 spot that was dug in space. And then the
10 purple, rectangular features are trenches.
11 They were literally trenching to see what the
12 buried metal might be.

13 Then some other features are shown in the
14 sort of orange-colored triangle. That was
15 something on the surface that was metal that
16 is part of the site, that's supposed to be
17 there, a natural site feature, not munitions
18 related.

19 So following all of the digging
20 summarized for you on figure 5, these were
21 the results. Non-munitions debris was
22 identified. Sometimes we call that in our
23 reporting "other debris." It was not
24 munitions related. It was found on the MRS,
25 and it could have been scrap metal, rocks

1 that in themselves were magnetic and were
2 detected by our instruments, nails, pipe,
3 pieces of construction debris, et cetera;
4 nothing munitions related. And so we just
5 kind of lump it in "other debris"
6 classification.

7 So -- and no material potentially
8 presenting an explosive hazard. No MPPEH was
9 found on the ground surface during all that
10 work or in the subsurface during the digging
11 that was done.

12 So we talked about munitions
13 constituents, and whether those may be
14 present from the fact that munitions have
15 been on the MRS for a while. Because we
16 found no munitions and there was no evidence
17 of munitions on this munitions response site
18 at Atlas Scrap Yard, no sampling for -- for
19 MC was even necessary.

20 So the conclusions of that remedial
21 investigation were that there is not an
22 explosive hazard at the Atlas Scrap Yard.

23 So, again, Dave introduced kind of how
24 the -- under CERCLA, we need to present that,
25 the rationale for recommending no further

1 action at Atlas. It is protective of the
2 receptors and the current and future land
3 use. Receptors being, you know, literally
4 the people who are walking and working and
5 visiting that area. So here we are
6 presenting in more detail, you know, that we
7 know the facility personnel will be on the
8 site, contractors, trainees, for military
9 training and maintenance activities, et
10 cetera.

11 And the conclusions of the proposed plan
12 that is being presented to you tonight for
13 comment are that there are -- no further
14 action is the preferred remedy at Atlas Scrap
15 Yard, as there have been no munitions
16 confirmed on this site.

17 And then the third site out of the four
18 that we are going through this evening,
19 Landfill North of Winklepeck. It's on -- at
20 the north -- somewhat on the north side of
21 Ravenna. And, again, I'll give you time to
22 grab the no further action proposed plan for
23 this Landfill North of Winklepeck. You might
24 be able to see those figures better by hand,
25 than up here.

1 Originally, it was 14.05 acres. It was
2 reduced to 2.32 acres in a future phase of
3 the MMRP, which I'll talk about in a second.
4 And this one also overlaps with an inactive
5 landfill that is being covered under the
6 installation restoration program, a separate
7 program.

8 Again, this MRS followed the same phases
9 of any MMRP project. So under the historical
10 record review, it began at a 14.05 size of
11 acres, and then going into the site
12 inspection that was done, when the visual
13 surveys of the surface were done, the area
14 was recommended to be reduced to a 2.32-acre
15 size, based on the observations during that
16 site inspection.

17 And at this particular Landfill North of
18 Winklepeck, only munitions debris. So that
19 is a fragment or a piece or a part from a
20 munition. But it has no explosive hazard in
21 and of itself, that piece. Munitions debris
22 is not explosively hazardous. And there were
23 some identified during the site inspection.

24 So that moved us to the remedial
25 investigation phase for this Landfill North

1 of Winklepeck, beginning with our 2.32 acres
2 that was being covered. There are wetlands
3 areas along the eastern side of this
4 munitions response site, but no buildings or
5 structures are -- are present on this MRS.
6 And that is figure 3 in the proposed plan as
7 shown.

8 So we have the greenish-yellow, larger
9 boundary of the 14.05 acres, and then the red
10 boundary is the 2.32 acres that were
11 recommended to carry forward. And then the
12 black dash boundary is the installation
13 restoration program. It's an inactive
14 landfill.

15 So that brings us to the most recent
16 phase, the remedial investigation itself.
17 When the field activities were conducted,
18 there were visual surveys, where technicians
19 are walking the area with hand-held
20 magnetometers. There was one area of buried
21 metal identified, but the metal items were
22 visible right there on the surface, and there
23 was no reason to do any further digging. And
24 no munitions constituents sampling was
25 indicated at this MRS. And we can talk about

1 that a little more.

2 The surface debris that was observed in
3 that one area that did have buried metal were
4 some rusted cans, pales, an empty 55-gallon
5 drum. Anything that was buried was similar
6 as what was on the surface. Nothing
7 munitions related was identified. So no
8 intrusive investigation or no digging was
9 conducted.

10 So, again, we have moved to the remedial
11 investigation phase. Based off of previous
12 indications, if there might be munitions
13 debris present, and the remedial
14 investigation fieldwork has confirmed that
15 there is not an explosive hazard present at
16 this MRS.

17 The next slide summarizes -- this figure
18 is figure 5 in the proposed plan. The
19 yellow-ish area was not able to be sampled.
20 It was covered with water. And then this
21 purple area here was the only place where
22 buried metal was confirmed to be present.
23 But it was easily identifiable, by what was
24 on the surface, of what that area contained,
25 with just rust -- like rusted pales, cans,

1 and the drum itself. Nothing explosively
2 hazardous and no munitions present.

3 So, again, the summary of our
4 recommendations, we have got facility
5 personnel, contractors, occasional
6 unauthorized trespassers. That would be the
7 receptors that would be accessing this MRS.
8 In the future, that would also include
9 National Guard trainees, as the area is used
10 for military training.

11 The results of the remedial investigation
12 show that no further action is an appropriate
13 and preferred remedy, as there have been no
14 munitions and explosives of concern. So
15 nothing with an explosives hazard verified to
16 be present on this MRS, which is a similar
17 conclusion for all four of the MRSs from
18 tonight.

19 So that is the third MRS. And then the
20 fourth out of the four is the Block D Igloo
21 Transferred. And that will be Dave one more
22 time. And then we'll be ready for questions.

23 MR. CRISPO: Hello again. So this site
24 is Block D Igloo Transferred, which is what
25 the "TD" stands for, and that is the only MRS

1 that was located -- which is located outside
2 of the installation boundaries. Out of all
3 the MRSs that have been investigated at Camp
4 Ravenna under the MMRP program, this is the
5 only site that has been -- that is actually
6 located -- physically located outside of the
7 installation.

8 So the historical background associated
9 with this site -- it's kind of interesting,
10 but it's also very tragic -- is that in 1943,
11 there was an explosion of over 2,500 clusters
12 of 20-pound fragmentation bombs, at Igloo
13 7-D-15. Igloo 7-D-15 was located at the
14 northern portion of the installation, and
15 it -- and concrete fragments were found as
16 far as 3,800 feet east of where the explosion
17 occurred. It is suspected that the cause of
18 the explosion was a faulty handling of the
19 fuse associated with ammunition pipe.

20 In all, a total of seven people were
21 killed in the incident, which was, I guess, a
22 bad day for Camp Ravenna. But that was --
23 that was also during the peak of the war. So
24 there were a lot of things going on back
25 then, and this probably got brushed under the

1 rug a little.

2 But, anyway, the -- so they found
3 concrete fragments as far as 3,800 feet to
4 the east. But when they looked at the debris
5 field, they found a multitude of debris
6 actually lied within a 3,000-foot radius
7 around it.

8 So they made that debris field the area
9 of investigation, and it included -- and the
10 total area of that 3,000-foot radius was
11 approximately 642 acres; 622 of it, most of
12 it, was located within the facility
13 boundaries. Then there was a small area,
14 19-plus acres that were located outside the
15 facility. That 19.25 acres eventually became
16 the Block D Igloo-TD, or transferred, site.

17 And the land use at the time at the TD
18 site, outside the facility, was residential,
19 agricultural, and there was also some
20 infrastructures that included a railroad
21 track and a right-of-way. I'll change -- I
22 think it's still the same.

23 So, anyway, this is the 3,000-foot radius
24 that I was telling you about. You can see
25 that the Igloo was very closely located at

1 the northern portion of the installation.
2 You can see the thick, black line running
3 through the middle of it; that's the
4 installation boundary.

5 That blue -- if you have -- I'm not sure
6 if you guys can -- so that blue area is
7 within the installation boundary, and that
8 denotes most of the debris field that was
9 identified. Then you have a red sliver
10 that's located just outside. That's the
11 19-plus acre area that eventually became the
12 Block D Igloo-TD MRS.

13 So the historical invest -- the
14 historical investigations that were conducted
15 at the site, again, included the historical
16 records review, the site inspection, as well
17 as the remedial investigation. During the
18 historical records review, the Army decided
19 that the -- they determined that that
20 642-acre debris field become the MRS for both
21 the Block D Igloo MRS within the
22 installation, and the Block D Igloo MR -- TD
23 MRS located outside the installation.

24 In addition, while they were stacking up
25 some information in the historical records

1 review, they identified some records showing
2 that non-munitions related debris, consisting
3 mostly of concrete fragments, were located --
4 were located throughout -- had been observed
5 and documented throughout the installation,
6 as well as outside the installation.

7 Associated with these -- these concrete
8 fragments were reportedly associated with
9 that explosion.

10 These locations had not been previously
11 investigated at the time. And, again, some
12 of the locations were actually located --
13 located outside the facility. And one of the
14 locations was reported as far as 15,000 or 3
15 miles away from the actual explosion itself.

16 So the site inspection was conducted in
17 2008 at both the Block D Igloo area within
18 the facility, as well as the TD area outside
19 the facility. And at the area outside the
20 facility, there was no evidence of any
21 material actually presenting a potential
22 hazard or any evidence of munitions
23 constituents contamination associated with
24 the explosion.

25 So the SI report recommended, since there

1 was nothing located outside the installation,
2 to remove this as the MRS footprint.
3 However, they did recommend in the SI report
4 to make the areas that I just mentioned in
5 the historical record report, the areas that
6 were located outside the installation, become
7 the new Block D Igloo-TD MRS.

8 So, basically, they took away from this
9 area, but said, you know what, you are done
10 investigating here, you know, but we still
11 think you need to go over and take a look at
12 these areas. So these areas consist of two
13 locations outside the facility boundaries, a
14 total -- they total 14.13 acres.

15 In this figure -- hopefully you can see.
16 I'll focus in. These areas denote the
17 revised MRS boundaries to both the Block
18 Igloo within the installation -- you can see
19 the -- the installation boundary is that
20 dashed line. It's not black. But it's the
21 dashed line. The Block Igloo MRS area is
22 within the installation of the -- of the deep
23 purple areas, if you can see them, kind of
24 the amorphous blocks. And those are the
25 areas where concrete fragments were

1 reportedly found within the installation, but
2 never investigated. And then you have the
3 new Block Igloo-TD, kind of these red areas,
4 outside the installation.

5 Located outside the installation, you've
6 got a small area there and then a larger area
7 here. That area right there is actually
8 located approximately 3 miles away from
9 the -- from the Igloo itself over there,
10 indicating the concrete fragments could have
11 flown approximately 3 miles, which is pretty
12 impressive.

13 One thing to -- another thing to note
14 about these areas shown on here is although
15 they are large areas, and they are areas
16 where concrete fragments were found, there
17 were no materials potentially presenting an
18 explosive hazard or any type of military
19 munitions identified at any of these areas.

20 So, yes, they found concrete fragments
21 there, but there was no record of any other
22 type of explosive hazards. And concrete
23 fragments are not considered to be explosive
24 hazards. And, therefore, moving forward into
25 the remedial investigation work plan, the

1 Army took this into consideration.

2 And as the remedial investigation phase
3 of the -- for this site started to come
4 into -- started to come into sight, the Army
5 decided they wanted to re-evaluate the
6 fragmentation distances associated with the
7 20-pound bomb that exploded at this Igloo.
8 So their thinking was, okay, we have got
9 fragmentation as far as 3 miles, but there is
10 still no record of any type of munitions or
11 explosives concern from this. There is no
12 type of munition debris that has been found.

13 So where did these things all go? So
14 development of the work plan, they consulted
15 with the Army Corps of Engineers, Huntsville
16 District, Center of Expertise; in particular,
17 Dr. Michelle Crull. And Dr. Crull is an
18 expert in munitions fragmentation distances.

19 And her revised calculation for these
20 20-pound bombs indicated that a 20-pound bomb
21 intact, in pieces, associated with this
22 explosion, could have only traveled
23 approximately 2,400 feet from the Igloo. And
24 that includes a very conservative factor of
25 safety.

1 So by doing that, by that -- by including
2 that revised distance within the work plan,
3 essentially reduced the MRS areas for the
4 Block D Igloo within the installation, but in
5 addition, it essentially eliminated the
6 entire Block D Igloo area outside the
7 installation.

8 So now we have got a -- we have got a
9 determination that we have all these areas
10 of -- with just concrete fragments,
11 non-explosive hazards, within the MRS. And
12 we also have the revised calculation that
13 says, okay, we don't have to go out and look
14 at anything outside the installation.

15 Well, the proof is on us to make sure
16 that that calculation is actually accurate.
17 And so we put -- so the Army put all of its
18 attention into the Block D Igloo within the
19 installation. And the results of that --
20 that I -- RI verified what Dr. Crull
21 estimated. And, in essence, the farthest
22 distance of any type of munitions or any type
23 of buried munitions debris item that was
24 found was approximately 1,800 feet away from
25 the Igloo. And that was well within the

1 factor of safety of 2,400 feet that was
2 determined by Dr. Crull.

3 So the results of the RI of Dr. Crull is
4 we didn't conduct an RI at the Block D
5 Igloo-TD MRS itself, but we did conduct our
6 RI investigation at the Block D Igloo within
7 the installation. And we determined that the
8 maximum distance of any type of munitions
9 debris item is 1,800 feet, which is, again,
10 well within that factor that we -- well
11 within that distance calculated by Dr. Crull.
12 And the results of that supported the Army's
13 determination that no further investigation
14 was required of the Block D Igloo-TD MRS
15 located outside the boundaries.

16 So this figure shows the current MRS
17 boundaries of the Block D Igloo. You can see
18 that it's a much smaller scale now. You can
19 barely see the facility boundary at the
20 northwest -- at the upper corner of the site.

21 Essentially, you would expect it to be --
22 now, it would be nice if this was a nice fan
23 shape, and, essentially, it was, as part of
24 our investigation. But you can see there is
25 kind of a little glowworm around the --

1 around the Igloo itself, which would be
2 expected, due to the velocity of the blast.

3 But the maximum distance of -- distance
4 of this MRS is approximately 2,400 feet to
5 the east. And this is the area where any
6 type of munition debris item or MEC item was
7 found during the remedial investigation.

8 So we come to this slide again for our
9 sites. And the preferred remedy must be
10 protective of the receptors associated with
11 current and future land use. The current
12 receptors at the site are residential. It's
13 a residential, agricultural area. And I
14 don't anticipate the future land -- future
15 receptors to change in the near future. So
16 it will remain as residential receptors. The
17 current land use at the site is residential,
18 recreational, and agricultural. And, again,
19 similar to the future receptors, the future
20 land use will not change.

21 So, therefore, based on the remedial
22 investigation, fragmentation distance
23 evaluation, and the results of the remedial
24 investigation that were conducted of the
25 Block D Igloo MRS, the results support that

1 NFA is the preferred and appropriate remedy
2 for the Block D Igloo-TD MRS that is located
3 outside the facility boundaries.

4 And with that, I'll let Kimberly take the
5 questions, or Catherine or whoever --

6 MS. VAUGHN: Thank you all for your
7 patience and your attention. I realize that
8 was a lot of information on four different
9 sites, with similar outcomes, but varying
10 details there.

11 So one thing we did want to note before
12 we move into questions, for all four of the
13 sites, Camp Ravenna coordinated with Ohio
14 EPA. They have reviewed, you know, the
15 conclusions of these documents throughout the
16 various phases.

17 And then we have Mr. Roope here this
18 evening as a representative. He is going to
19 weigh in on their findings.

20 MR. ROOPE: In an adequate review, the
21 Ohio EPA concurs with the remedy of no
22 further action for the proposed sites during
23 this presentation for the munitions response
24 team.

25 MS. VAUGHN: So, again, part of having

1 the public meeting, hosting this meeting,
2 putting the information in front of you, the
3 public, is to gather your comments and
4 feedback. There are several ways you can do
5 that. It's up to your choice. In writing;
6 we have some forms here that can be filled
7 in, e-mailed back, or mailed in, regular
8 postal mail.

9 You can ask in person at the public
10 meeting. We would just ask that you come up,
11 and let's make sure that Shannon can hear
12 your question clearly. That's part of what
13 we are required to do. And then if we really
14 have a lot of questions and we need to form a
15 line, Catherine is here. She can be the
16 start of the line for questions.

17 I'm not sure if there is a time limit on
18 our timing. It doesn't sound like we have
19 any questions that are going to come in
20 verbally.

21 MR. SEDLAK: The comment period extends
22 beyond the meeting?

23 MS. VAUGHN: Definitely. Definitely.
24 Thank you, Kevin. The public comment period,
25 it did begin when the documents were placed

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out into the administrative record for public to view, either by the Web site or at the library. So that started on November 3rd and continues through December 8th.

And that is also noted on the -- on the blank forms we have, if you are going to mail it in. It does need to be postmarked by December 8th or e-mailed in by December 8th.

I really appreciate your attention and time in attending this evening. Thank you very much.

(This proceeding concluded at 7:22 p.m.)

C E R T I F I C A T E

1
2 STATE OF OHIO,)
3 STARK COUNTY.)

4 I, Shannon Roberts, a Registered Professional
5 Reporter and Notary Public in and for the State of
6 Ohio, duly commissioned and qualified, do hereby
7 certify that the within testimony so given was by me
8 reduced to Stenotype, afterwards prepared and produced
9 by means of Computer-Aided Transcription, and that the
10 foregoing is a true and correct transcription of the
11 testimony so given.

12 I further certify that this proceeding was taken
13 at the time and place in the foregoing caption
14 specified.

15 I further certify that I am not a relative of,
16 employee of or attorney for any party or counsel, or
17 otherwise financially interested in this action.

18 I do further certify that I am not, nor is the
19 court reporting firm with which I am affiliated, under
20 a contract as defined in Civil Rule 28(D).

21 IN WITNESS WHEREOF, I have hereunto set my hand
22 and affixed my seal of office at Canton, Ohio, this
23 17th day of November, 2017.

24
25


Shannon Roberts, Notary Public
My commission expires February 2, 2018