### PUBLIC MEETING FOR RVAAP-032-R-01 40MM FIRING RANGE RVAAP-016-R-01 FUZE AND BOOSTER QUARRY MUNITIONS RESPONSE SITES

Contract W912DR-15-D-0016 Delivery Order 0001



US Army Corps of Engineers.

U.S. ARMY CORPS OF ENGINEERS BALTIMORE DISTRICT 10 S. HOWARD STREET, ROOM 7000 BALTIMORE, MARYLAND 21201

> Prepared by: HydroGeoLogic, Inc. (HGL) 11107 Sunset Hills Road Suite 400 Reston, Virginia 20190

> > March 2019

REPORT DOCUMENTATION PAGE					Form Approved //B No. 0704-0188		
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<b>1. REPORT DATE</b> (DD 3-26-201		YY) 2. REPC	RT TYPE Meeting Mem				ERED (From - To) 2018
Public Meeting Memorandum for RVAAP-032-R-01 40MM Firing Range and RVAAP-016-R-01 Fuze and Booster Quarry Munitions Response Sites, for the				ITRACT NUMBER 12DR-15-D-0016, Delivery Order 0001			
			intions response ones,	ons response sites, for the	5b. GRANT NUMBER NA		
					5c. PRO	GRAM ELEMEN	<b>NUMBER</b> NA
6. AUTHOR(S) Kimberly Vaughn, PG,	HydroG	eoLogic, Inc. (H	GL)		5d. PROJECT NUMBER NA		
					5e. TASK NUMBER NA		
					5f. WOR	K UNIT NUMBER	R NA
7. PERFORMING ORG HGL 11107 Sunset Hills Rd, Reston, VA 20190			D ADDRESS(ES)			8. PERFORMING REPORT NUM	G ORGANIZATION MBER NA
9. SPONSORING/MON		GAGENCY NAM	E(S) AND ADDRESS(E	S)		10. SPONSOR/M	IONITOR'S ACRONYM(S)
U.S. Army Corps of Engineers, North Atlantic Division, Baltimore District 2 Hopkins Plaza					USACE		
Baltimore, MD 21201						11. SPONSOR/MONITOR'S REPORT NUMBER(S) NA	
<b>12. DISTRIBUTION/AV</b> Administrative Record			r				
<b>13. SUPPLEMENTARY</b> None	NOTES						
14. ABSTRACT							
This draft public meeti relevant to the public m Environmental Protect munitions constituents	neeting h ion Agen at two m	eld November 1, cy, to submit for unitions respons	2018. The Army Nation public review and comm	nal Guard condu ments four Prop venna Army Arr	ucted the p losed Plans imunition l	bublic meeting, in s for munitions an	comment, and records details consultation with the Ohio d explosives of concern and nd Trumbull counties, Ohio:
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Paid News Releases and Affidavits of Publication PUBLIC NOTICE

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 Thursday, November 1, 2018 for Army National Guard Release of Proposed Plans for two Munitions Response Sites at the Former Ravenna Army Ammunition Plant: Fuze and Booster Quarry

40mm Firing Range

Ravenna – The Army National Guard, in consultation with the Ohio Environmental Protection Agency, submits for public review and comment two (2) Proposed Plans for two Munitions Response Sites at the former Ravenna Army Ammunition Plant (RVAAP) in Portage and Trumbull counties, Ohio.

The Fuze and Booster Quarry and 40mm Firing Range 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 recommendations for No Further Action at both MRSs and provide the rationale for these recommendations.

On Thursday November 1, 2018, a public meeting will be held at the Shearer Community Center (Paris Township Hall) at 9355 Newton Falls 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 October 25, 2018 to December 1, 2018. 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 Kathrvn.s.tait.nfg@mail.mil.

In accordance with CERCLA, the No Further Action recommendation presented in the Proposed Plans was summarized and also presented in earlier remedial investigation and feasibility study reports. All reports are now available for public review at the RVAAP Restoration Program Information Repositories 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 the MRSs 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 October 25, 2018 to December 1, 2018. 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 Kathryn Tait at 614-336-6136.

#294-2T-October 21 & 28, 2018 #WOH0046311

#### PROOF OF PUBLICATION

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SUNDAM FOR (2) TWO	
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Camp Ravenna Joint Military Training Center Camp Ravenna Environmental Office 1438 State Route 534 SW - Newton Falls, OH 44444 614-336-6136

PUBLIC NOTICE

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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 Kathryn Tait at 614-336-6136.

**Public Meeting Sign-In Sheet** 

Name	Phone Number	Email	
EmilyJustice			
Emily Justice Kim Gross			
AFREN EDWARDS			
JO ADN RUPERT			
ROBERT RUPERT			
Kimberly Vaughn			
Caroline Borgini			
KEVIN SEDLAK			
GEDRON TOMPLINS			
Bab Palomsky			
Nick Roope			
MARIL JOHNSON			
Joseph Butte			
EVEL GREG FRONCIS			
Ed Samec			

#### **PUBLIC SIGN-IN SHEET**

#### Ravenna Army Ammunition Plant Restoration Program Proposed Plans Public Meeting November 1, 2018

Name	Phone Number	Email
Katie Tait		
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40mm Firing Range Fact Sheet

Ravenna Army Ammunition Plant No Further Action Proposed Plan for 40mm Firing Range Munitions Response Site

Where is the 40mm Firing Range? The RVAAP-032-R-01 40mm Firing Range Munitions Response Site (MRS) is an 8.55-acre parcel located in the southern-central portion of the former Ravenna Army Ammunition Plant (RVAAP), now known as Camp Ravenna. Camp Ravenna is located in east-central Portage County and southwestern Trumbull County, Ohio about 3 miles east-northeast of the city of Ravenna and 1-mile northwest of the city of Newton Falls.

#### How was this area used?

The MRS is a former 40mm Firing Range that operated between 1969 and 1971. Munitions fired at the former range included M407A1-series 40mm practice grenades and M406-series high explosive grenades. The target impact area was well-defined with a berm that has since been removed. The firing point was situated at the eastern portion of the former range.

### What is happening now at the 40mm Firing Range?

Between 2007 and 2015, the United States (U.S.) Army conducted munitions investigative activities that included a Site Inspection (SI) and Remedial Investigation (RI) activities at the MRS under the Military Munitions Response Program (MMRP). The purpose of the investigations was to determine if any explosive safety hazards or munition constituents (MC) associated with the historical activities that occurred at the MRS are present.

No DoD military munitions confirmed to be MEC were identified at the firing point or in the area between the firing point and impact area; however, multiple DoD military munitions that were confirmed by UXO-qualified personnel as munitions debris (MD) were found on the ground surface at the suspected impact area and 100 feet beyond. The MD consisted of aluminum 40mm grenade nose caps and casings.

Geophysical data collection, intrusive investigations, and environmental sampling were completed during the RI. Numerous MD items were encountered on the ground surface and subsurface. The MD recovered were associated with the 40mm practice grenades known to have been discharged at the MRS. No DoD military munitions confirmed to be MEC items were identified. Surface soil sampling did not identify any chemicals of concerns in surface soils. Additional sampling efforts were not warranted. A summary of the previous investigations and findings from the most recent activities at the MRS are presented in the Final Remedial Investigation Report for RVAAP-032-R-01 40mm Firing Range MRS, Version 1.0, published in April 2015.

Based on further evaluation of the RI results, the Army concluded the 40mm Firing Range MRS be recommended for No Further Action (NFA). Since the RI recommended conducting a Feasibility Study (FS), the FS was conducted to provide the necessary rationale to support and document the NFA determination. The NFA alternative is technically and administratively implementable and there are no costs. The NFA alternative is protective of human health and the environment because no explosive hazard or unacceptable risk due MC-related to contamination are present at the MRS.

#### What is the Proposed Plan?

The Proposed Plan is a document used to facilitate public involvement in the remedy selection process. The document presents the preliminary recommendations concerning how best to address contamination at the site, presents alternatives that were evaluated, and explains the reasons that the Preferred Alternative is



recommended. In the case of the 40mm Firing Range MRS, the No Action alternative is protective of human health and the environment because no explosive hazard or unacceptable risk due to MC-related contamination is present at the MRS.

The Proposed Plan meets the statutory requirements promulgated by the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA). The recommendations provided in the Proposed Plan are not final, and the Army, in consultation with the Ohio EPA, is soliciting input to provide the public with an opportunity to participate in the recommended action selection process. The *No Further Action Proposed Plan for RVAAP-032-R-01 40mm Firing Range Munitions Response Site*, published in October 2018 is available for public comment.

### What is the recommended action?

Since there are no explosive safety hazards or associated risks from MC-related contamination, the Army, in consultation with the Ohio EPA, is recommending NFA for the 40mm Firing Range MRS.

#### How can the public participate?

The recommended action can change based on public comments received during a 30-day comment period. The Army encourages interested citizens to review documents related to the 40mm Firing Range MRS and comment on the proposed action. During the 30-day comment period from October 25 to December 1, 2018, the public can read about the proposed action, ask questions, and make recommendations.

The Proposed Plan is available online at www.rvaap.org (click RVAAP Documents and choose Documents for Public Review and *Comment*). The full Administrative Record can be found at:

#### **Reed Memorial Library**

167 East Main Street Ravenna, Ohio 44266 (330) 296-2827 Hours of operation: 9 a.m.–9 p.m. Monday–Thursday 9 a.m.–6 p.m. Friday 9 a.m.–5 p.m. Saturday 1 p.m.–5 p.m. Sunday

Newton Falls Public Library 204 South Canal Street Newton Falls, Ohio 44444 (330) 872-1282 Hours of operation: 9 a.m.–8 p.m. Monday–Thursday 9 a.m.–5 p.m. Friday and Saturday

### Where do I send my responses to the Proposed Plan?

Please send your comments, questions, or suggestions about the Proposed Plan to <u>kathryn.s.tait.nfg@mail.mil</u> or you can mail them directly to:

**Ms. Kathryn Tait Camp Ravenna Environmental Office** 1438 State Route 534 SW Newton Falls, Ohio 44444

The last day to postmark your responses to the Proposed Plan is December 1, 2018.

**Fuze and Booster Quarry Fact Sheet** 

Army Ammunition Plant No Further Action Proposed Plan for Fuze and Booster Quarry MRS

### Where is the Fuze and Booster Quarry?

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The RVAAP-016-R-01 Fuze and Booster Quarry Munitions Response Site (MRS) is a 4.92-acre parcel located in the south-central portion of the former Ravenna Army Ammunition Plant (RVAAP), now known as Camp Ravenna. Camp Ravenna is located in east-central Portage County and southwestern Trumbull County, Ohio about 3 miles east-northeast of the city of Ravenna and 1-mile northwest of the city of Newton Falls.

#### How was this area used?

The Fuze and Booster Quarry MRS was a stone and ballast quarry excavated to provide building material for RVAAP. Between 1945 and 1949 the quarry was used as an open burn area. Thereafter, the quarry was used as a landfill accepting fuze and booster assemblies, projectiles, residual ash, and sanitary waste. In 1976, landfill materials including munitions-related items were removed and transferred to either Ramsdell Quarry Landfill or another RVAAP burning ground. Between 1987 and 1993, spent brine regenerate and sand filtration backwash was discharged into the three elongated settling ponds.

### What is happening now at the Fuze and Booster Quarry?

Between 2007 and 2015, the United States (U.S.) Army conducted investigative activities that included a site inspection (SI) and remedial investigation (RI) activities at the MRS under the Military Munitions Response Program (MMRP). The purpose of the investigations was to determine if any explosive safety hazards or associated munition constituents (MC) associated with the historical activities that occurred at the MRS were present. During the SI, instrument-aided visual surveys were performed on the quarry banks and surroundings areas. Munitions debris (MD) was found on the southeastern side of the southern pond. Multiple high-concentrations areas of **subsurface anomalies** were detected during the survey. These areas were suspected to represent possible buried munitions-related items. No munitions and explosives of concern (MEC) were encountered at the MRS during the SI field work.

collection, intrusive Geophysical data investigations, and environmental sampling were completed during the RI. All items recovered were inspected and classified and munitions debris (MD). No munitions and explosives of concern (MEC) were identified. The RI determined that site-related chemicals identified from environmental sampling and analysis did not originate from munitions or other munitionsrelated activities. A summary of the previous investigations and findings from the most recent activities at the MRS are presented in the Final Remedial Investigation Report for RVAAP-016-R-01 Fuze and Booster Quarry MRS, Version 1.0, published in June 2015.

Based on further evaluation of the RI results, the Army concluded the Fuze and Booster Quarry MRS be recommended for No Further Action (NFA). Since the RI recommended conducting a Feasibility Study (FS), the FS was conducted to provide the necessary rationale to support and document the NFA determination. The NFA alternative is technically and administratively implementable and there are no costs. The NFA alternative is protective of human health and the environment because no explosive hazard or due MC-related unacceptable risk to contamination are present at the MRS.

Army Ammunition Plant No Further Action Proposed Plan for Fuze and Booster Quarry MRS

#### What is the Proposed Plan?

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### What is the recommended action?

Since there are no explosive safety hazards or risks from MC-related contamination, the Army, in consultation with the Ohio EPA, is recommending NFA for the Fuze and Booster Quarry MRS.

#### How can the public participate?

The recommended action can change based on public comments received during a 30-day comment period. The Army encourages interested citizens to review documents related to the Fuze and Booster Quarry MRS and comment on the proposed action. During the 30-day comment period from October 25 to December 1, 2018, the public can read about the proposed action, ask questions, and make recommendations.

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The last day to postmark your responses to the Proposed Plan is December 1, 2018.

**Slide Presentation** 

### NO FURTHER ACTION PROPOSED PLANS FOR TWO MUNITIONS RESPONSE SITES

### FUZE AND BOOSTER QUARRY AND 40MM FIRING RANGE

Presented by: HydroGeoLogic, Inc. November 1, 2018

"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."



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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



## **Acronym Cheat Sheet**

AOC	Area of Concern
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



### 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



## The Stages of an MMRP Project





## Former Ravenna Army Ammunition Plant Location



### **Munitions Response Site Locations**





# Fuze and Booster Quarry MRS



# **Historical Background**

- The Fuze and Booster Quarry MRS is located in the south-central portion of the facility.
  - Originally 12.47-acres in size
  - The stone and ballast quarry provided building materials for the installation
  - Between 1945 and 1949 the MRS was used for open burn activities
  - The MRS was later used as a landfill for fuze and booster assemblies, projectiles, residual ash, and sanitary waste
- Landfill materials were removed from the MRS in 1976
  - Removed materials included the munitions-related items previously disposed of at the landfill
  - Materials were transferred to Ramsdell Quarry or other burning grounds within the facility
  - Three settling ponds were constructed to accept spent brine regenerate and sand filtration backwash water discharge between 1987 and 1993
- The size of the MRS was reduced to 4.92-acres and encompasses three ponds and the immediate surrounding area



## **Historical Investigations**

### • 2007, Historical Records Review

- Identified the 12.47-acre MRS.
- No previous surveys for munitions-related items had been conducted at the time of the HRR
- Recommended MEC investigations for all three settling ponds
- 2008, Site Inspection
  - Instrument-assisted visual surveys were conducted
    - Multiple areas with high-concentrations of subsurface anomalies were identified in terrestrial areas
    - Settling ponds were not investigated
  - Recommended further investigation of the reduced MRS area, 4.92 acres.
- 2015, Remedial Investigation
- 2018, Feasibility Study





## Fuze and **Booster Quarry MRS** Features

۲	Former Water Control Intake
	Surface Water
	MRS
[]]	2007 HRR MRS Boundary
	Installation Boundary
	initions response site Ravenna Army Ammuntion Plant
	MRS=mu



# **Current conditions**

- The Fuze and Booster Quarry MRS is 4.92 acres
  - Encompasses three settling ponds
  - Ponds surrounded by thick vegetation and steep slopes
- Access to the facility is controlled; however, access to the MRS is unrestricted
- Unimproved gravel roads are located throughout the site



# **Remedial Investigation**

- Field work conducted in multiple phases:
  - Geophysical data collection December 2011
  - Anomaly reacquisition April 2012 and August 2013
  - Environmental Sampling August 2013
- Activities included
  - Digital geophysical mapping survey across 2.6 acres
    - 0.75 acres were determined to be inaccessible due to thick vegetation and safety hazards (steep slopes)
  - Four wet sediment ISM samples were collected from sediment surface to 0.5-feet below sediment surface
    - Two samples were collected from the southern-most pond
    - One sample was collected from the north pond
    - One sample was collected from the central pond





## Remedial Investigation Results





# **Remedial Investigation Results**

- Digital geophysical surveys identified individual anomalies and high anomaly density areas
  - 227 individual anomalies were hand dug
  - Trenches were completed in the high anomaly density areas
  - Only MD and debris were identified
- No explosive hazards were identified
- No MC source was identified during the Remedial Investigation
  - No evidence that the site-related chemicals originated from munitions or munitions-related activities
- Evaluation in an FS was recommended



## Feasibility Study

- The project team further evaluated the RI results; concluding there are no explosive hazards from MEC and no unacceptable risk due to MC-related contamination.
- The No Further Action Alternative was evaluated using the nine criteria listed below





## Feasibility Study

There are no hazards associated with exposure to DoD military munitions and no potential for MC risks to human or environmental receptors at the MRS. The Army concluded the Fuze and Booster Quarry MRS be recommended for NFA.

The No Further Action Alternative is

- Technically and administratively implementable
- No costs associated with implementation
- Protective of human health and the environment since no explosive hazards or unacceptable risks exist



## **Proposed Plan Recommendations**

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

Current and future receptors: Industrial receptors

Current and future land use: Military training, maintenance, natural resource management, hunting and fishing activities, and restoration activities (e.g., groundwater monitoring)

The results of the Remedial Investigation fieldwork and Feasibility Study evaluation for the Fuze and Booster Quarry MRS support the determination that NFA is the preferred remedy and is also protective of a potential future residential receptor.

Note: The NFA determination is protective of potential future human receptors (such as residential receptors). Though there are no current plans for the MRS to change from an industrial land use to a residential land use, there are no unacceptable risks to a potential future residential receptor from explosive hazards and no potential source of MC exists at the MRS.



# 40mm Firing Range MRS



# **Historical Background**

- The MRS is approximately 5.17 acres located in the south-central portion of the facility
  - The former 40mm firing range operated between 1969 and 1971
  - The MRS consists of the former firing range and the overshot area
  - Munitions fired at the range include M407A1-series 40mm practice grenades and M406-series high explosive 40mm grenades
  - According to a 1978 report, each of the 2,500 rounds fired on the ranges has been accounted for
- The target impact area was well-defined with a berm located 350 meters from the firing point
- Remnants of the firing point remain and include a wooden structure (storage), gun mount foundation, and chronograph foundation


# **Historical Investigations**

## • 2007, Historical Records Review

- Identified the 5.17 acre MRS
- Documented reports from facility personnel identified unexploded ordnance
- 2008, Site Inspection
  - An investigation was completed along a meandering path at the down-range target impact area, overshot area, and firing point
    - MD (40mm grenade nose caps and casings) was identified on the ground surface at the suspected impact area and 100-feet beyond
    - No DoD military munitions confirmed to be MEC were observed
  - Environmental sampling was not conducted during the SI
- 2015, Remedial Investigation
- 2018, Feasibility Study



# 40mm Firing Range MRS Features



US Army Corps of Engineers.

# **Current Conditions**

- The 40mm Firing Range MRS is 8.55 acres
  - Forested with this vegetation and ground cover
  - 1.5 acre open area with tall grasses is located near the former firing point
  - The MRS slopes down to the west towards the Fuze and Booster Quarry MRS
- No structures exist within the MRS except for the remnants of the wooden storage shed
- Once on the facility, access to the MRS is unrestricted



# **Remedial Investigation**

- Field activities were conducted in two phases:
  - Geophysical investigation November and December 2011
  - Intrusive Investigation and environmental sampling December 2011
- Activities included:
  - Numerous MD items associated with 40mm grenade were recovered from the ground surface and subsurface
  - No MEC items were recovered
  - Environmental sampling:
    - Three ISM surface soil samples were collected
      - Two were 0.63 acres in size collected from the impact area
      - One was 0.05-acres in size from the firing point



## **Remedial Investigation Results**



# **Remedial Investigation Results**

- No MEC items have been identified at the MRS to date
- Only small quantities of MD have been identified at the MRS
- Explosive hazards are not expected at the 40mm Firing Range MRS
- Analytes detected consisted of nitroguanidine at the firing point and aluminum and lead at the former down range impact area.
  - Nitroguanidine is not associated with the munitions used at this site
  - Aluminum and lead concentrations were determined to be consistent with background concentrations
- No MC-related contamination was identified human health and ecological risk assessments were not warranted



## Feasibility Study

- The project team further evaluated the RI results; concluding there are no explosive hazards from MEC and no unacceptable risk due to MC-related contamination.
- The No Further Action Alternative was evaluated using the nine criteria listed below





## Feasibility Study

There are no hazards associated with exposure to DoD military munitions and no potential for MC risks to human or ecological receptors at the MRS. The Army concluded the 40mm Firing Range MRS be recommended for NFA.

The No Further Action Alternative is

- Technically and administratively implementable
- No costs associated with implementation
- Protective of human health and the environment since no explosive hazards or unacceptable risks exist



## **Proposed Plan Recommendations**

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

Current and future receptors: Industrial receptors

Current and future land use: Maintenance and natural resource activities and military training

The results of the Remedial Investigation fieldwork and Feasibility Study evaluation for the 40mm Firing Range MRS support the determination that NFA is the preferred remedy and is also protective of a potential future residential receptor.

Note: The NFA determination is protective of other potential future human receptors (such as residential receptors). Though there are no current plans for the MRS to change from an industrial land use to a residential land use, there are no unacceptable risks to a potential future residential receptor from explosive hazards and no potential source of MC exists at the MRS.



## 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) kathryn.s.tait.nfg@mail.mil
- By mail (mailing address shown on the public comment forms)
  - Ms. Kathryn Tait Camp Ravenna Environmental Office 1438 State Route 534 SW Newton Falls, Ohio 44444
- Asked in person at the public meeting

The public comment period began October 25, 2018 and continues through December 1, 2018.







HGL—No Further Action Proposed Plan—Former RVAAP, Ohio



Final September 2018



Final September 2018 V

MC denotes Munitions Constituents

**Public Meeting Transcripts** 

#### PUBLIC MEETING

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IN RE: NO FURTHER ACTION PROPOSED PLANS FOR TWO MUNITIONS RESPONSE SITES

FUSE AND BOOSTER QUARRY

AND

40MM FIRING RANGE

Presented by:

Army National Guard

November 1, 2018 6:30 p.m.

Location:

Shearer Community Center 9355 Newton Falls Road Ravenna, Ohio

Grace M. Hilpert-Roach, RPR

11/1/2018

		Page 2
1	APPEARANCES:	
2	On behalf of HydroGeoLogic, Inc.:	
3	KIMBERLY S. VAUGHN	
4	Senior Section Manager 2	
5	4835 University Square, Suite 15	
6	Huntsville, Alabama 35816	
7	(254) 228-5616	
8	kvaughn@hgl.com	
9		
10	ALSO PRESENT:	
11	Emily Justice, APTIM	
12	Kevin Sedlak, Army National Guard	
13	Nick Roope, Ohio EPA	
14	Mark Johnson, Ohio EPA	
15	Kathryn Tait, Army National Guard	
16	Kim Gross, US Army Corps of	
17	Engineers	
18		
19		
20		
21		
22		
23		
24		
25		

11/1/2018

	Page 3
1	MR. SEDLAK: Good evening, everybody.
2	We're going to get started. I appreciate you
3	all coming out on a nice, rainy night to see our
4	presentation. We're going to do two sites today
5	so it's pretty interesting.
6	My name is Kevin Sedlak. I'm the
7	restoration project manager for the Army
8	National Guard at Camp James A. Garfield. We
9	did change the name. I'm sure you all picked up
10	on that.
11	And we've got sitting at the front
12	table we've got Nick Roope with the Ohio EPA,
13	we've got Mark Johnson with the Ohio EPA, Katie
14	Tait with the Ohio Army National Guard, and Kim
15	Gross with the Corps of Engineers out of
16	Baltimore, and they're the project manager for
17	the contractor, which is HGL and APTIM. It's a
18	joint venture contract. They've been doing all
19	the work out here for us and have written all
20	the reports.
21	We have a court reporter, so everything
22	we say will be transcribed. We'll have that in
23	a final and it will be up on our website, like
24	most everything always is.
25	We've got all the copies over there of

11/1/2018

	Page 4
1	all the documents. Make sure you grab one. We
2	have packets of stuff. And we have
3	refreshments.
4	We'll have questions at the end. I
5	believe that's how we're going to do it, so
6	enjoy yourself and we'll be done in a little
7	while.
8	MS. VAUGHN: Thanks, Kevin.
9	Yes. Welcome. Thanks, everyone, for
10	coming out with bad weather. We really
11	appreciate your time and your interest in the
12	facility here, to come and learn more about,
13	with our presentation.
14	Just some of the information for the
15	room, we do have women and men's restroom right
16	over here to the back. Exits, for safety, two
17	here clearly marked. Watch out for these cords,
18	folks, who are walking back and forth up front.
19	I'm Kimberly Vaughn, and I work for
20	HydroGeoLogic. I work along with Emily Justice,
21	who's also going to present tonight on a couple
22	of the sites that we're talking about, from
23	APTIM.
24	We both are working for the U.S. Army
25	Corps of Engineers and the Army National Guard

11/1/2018

1 to give you the summary of the Proposed Plans 2 for these two sites that are being presented 3 tonight. 4 There was an agenda in some of the information materials and in the slide packet 5 6 that you may have. It's just summarizing what 7 we'll go through formally here tonight and the 8 site conditions, the results of all the 9 investigations that have been done over the 10 years. 11 Hold questions, as Kevin said, until 12 the end, if you don't mind. As part of the 13 program that we're working under, we are required to take note of all public comments 14 15 that we receive on these Proposed Plans, and 16 that's why the court reporter is necessary for 17 that task. 18 So we have some pens and some blank 19 If you would like to note any questions, pages. 20 we'll formally take those questions toward the 21 end. 22 We'll try not to -- in the program that 23 we're working under, of course, there are 24 acronyms and there are some terms that we 25 commonly use in what we do. I will try not to

Page 5

11/1/2018

Page 6 1 slip into too many of those. But for your 2 familiarity, there's a page in the slides here 3 that show some of the terms we commonly use in 4 the work that we're doing at the facility. 5 The most common words that you'll hear 6 me slip into, if I don't remember, will be MEC, 7 munitions and explosives of concern. Those are 8 items that are still explosively hazardous. And 9 we will shorten that sometimes and we'll say MEC 10 for M-E-C right here, munitions and explosives 11 of concern. 12 Or sometimes we'll speak of munitions 13 constituents or we'll shorten it to MC. Those 14 are two of the most common acronyms that I may 15 forget and tend to slip into use of. And the 16 munitions constituents are the components, the 17 chemical components that might have been in the soil from munitions present at a site. 18 19 I spoke briefly about the program that 20 we're working under. It is the Military 21 Munitions Response Program. It's applied under CERCLA. You may have heard CERCLA commonly 22 23 referred to as Superfund. It's the way that 24 Department of Defense military munitions are 25 addressed under CERCLA. So that's the program

11/1/2018

Page 7

that we're working under in the investigations
we've done on the sites here.

3 Working under the Military Munitions 4 Response Program, each site flows through 5 various phases. We've got early investigations, 6 maybe historical records searches, some actual 7 field work that is done, you know, the workers 8 are out on the site physically collecting 9 samples and gathering data. And then the 10 Proposed Plan phase that we're at tonight is 11 highlighted.

12 In general, just where we all are this 13 evening, the location of the facility, the former Ravenna Army Ammunition Plant is shown 14 15 here, just to get us oriented. And then where 16 the two sites that we're talking about tonight, 17 the two munitions response sites, are shown on the next slide for your general orientation to 18 19 see where -- our community center is over here 20 sort of on the south side and the two MRSs, 21 munitions response sites, that we'll talk about are shown in red there. 22 23 And this is slide 7, so you can see

24 that maybe closer up in the handout and see 25 where the two sites are that we'll be talking

11/1/2018

1 about tonight.

2	The first of the two that I'll run
3	through, and then Ms. Emily will take over for
4	the other site, the 40-millimeter firing range.
5	But the first one that I'll be speaking about is
6	the Fuze and Booster Quarry Munitions Response
7	Site.
8	So briefly for each site we'll go
9	through the history, the background, the current
10	site conditions that are known, and then the
11	investigations performed, and what the
12	recommended path forward is for the future.
13	It's kind of what we'll run through for each
14	site.

15 So this is a lot of terms here, words 16 here on this slide, but we also have some maps 17 available. But it was originally a quarry, the 18 Fuze and Booster Quarry, that was then used for 19 open burning activities.

It does have three ponds that are present on the site. They were used as settling ponds. And there's a lot of detail in the report. You may have picked up a copy of it in the Proposed Plan. There is a longer rundown of the history of the Fuze and Booster Quarry.

Page 8

11/1/2018

Page 9

1 One item to note is there was a change 2 in the size over time. Originally, when it was 3 investigated, it was about the 12 and a half 4 acres listed here. And as part of the 5 investigation process, that size did change to 6 about five acres in size. So I wanted to point 7 that out. 8 After the overview of the history we've 9 got, you remember on the slide that had all of 10 the phases of a Military Munitions Response Program, these are some of the documents, some 11 12 of the reports that are written during each of 13 those phases. And each of these here are available on the administrative record website, 14 that is that website for folks to look at each 15 16 of these reports if you would like to. 17 So in summary, we had a historical records review where available records were 18 19 searched to see what the history at the Fuze and 20 Booster Quarry may have been, what next steps 21 may need to have been done. Then a site 22 inspection was done. 23 There is a figure that we'll look at on 24 the next slide showing the results of that site

inspection. And then we'll talk in a few slides

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11/1/2018

Page 10

about the remedial investigation and the 1 2 feasibility study that were also done. 3 So the next slide is showing what is Figure 3 from the Proposed Plan, and we also 4 5 have, at the very back of the stapled package of 6 your copy of the slides, some of these maps are 7 at the very back in case they don't show up very 8 well here. We turned off some of the lights 9 trying to get the brightness, and that was the 10 best solution we had found there. But this is Figure 3 from the Proposed 11 12 If you have that available, and it's also Plan. 13 at the very back right after page 30 in your 14 slides, it's a larger copy of this figure. So 15 after -- again, after the site inspection, it 16 had resulted in the 4.92 acres in size. So this 17 red boundary is that acreage. We're looking at just what are the 18 19 current site conditions at the site over there 20 on the facility right now today. We do have the 21 ponds that we talked about, and there are some gravel roads running along the western boundary 22 23 there, some roads for crossing through. 24 The next slide is, again, just kind of 25 restating what I just summarized. And what's

11/1/2018

	Page 11
1	shown on the map is kind of those current site
2	conditions. It's got the pond. Around the
3	ponds there are some thick vegetation. They do
4	have water in them that fluctuates, and there
5	are some slopes around each of those ponds.
6	And we all know that access to the
7	facility is controlled, but this particular Fuze
8	and Booster Quarry site, once inside the
9	facility, is unrestricted access to this site.
10	So that kind of shows, you know, what are the
11	conditions on the site right now in time.
12	And then now we're going to talk about
13	the remedial investigation. That's another one
14	of those phases of the Military Munitions
15	Response Program that we were talking about.
16	Each of these phases has documents and reports
17	that are done at each of those relevant points
18	in the process.
19	So the remedial investigation, this is
20	kind of a rundown on slide 13 of all of the data
21	collected at the remedial investigation phase.
22	So we do geophysical surveying. That is
23	surveying to see if there is buried metal, if
24	there's metal in the subsurface of the area.
25	And then after that the anomalies we

	Page
1	may use that word, anomalies, that is a
2	location, a point location where we go and
3	actually dig the item up. The geophysical
4	surveying showed us it was there. Then we go
5	and dig it up to see what it is.
б	There's also sampling that's done. So
7	we did some incremental sampling, methodology
8	sampling of the bottom of the three ponds. So
9	all of this data was gathered during the
10	remedial investigation. And, again, it is also
11	summarized in more text in the Proposed Plan
12	that you have a copy of.
13	The next slide, slide 14, again, shows
14	on a figure, you know, everything that was kind
15	of written on slide 13, the slide before. So
16	this is actually those results that I briefly
17	discussed that are listed on the slide.
18	It's also included on the next page,
19	page 31, in that packet of stapled slides that
20	you've got, if you would like to look at it in
21	more detail.
22	So some of the things I wanted to point
23	out here is, you can see the areas around the
24	pond where the yellow circles are the points,
25	those anomaly points. That's one location where

11/1/2018

	Page 13
1	buried metal was indicated, and then we went and
2	dug it up to see what it was.
3	And those were all materials documented
4	as safe. That was munitions debris that did not
5	have any explosive hazards. So nothing with
6	explosive hazard was identified where the yellow
7	circles are shown.
8	And then the areas that are shown with
9	the blue rectangles, there was enough of the
10	buried metal in one place where one point was
11	not dug, an actual trench was dug. There was
12	enough metal in the ground that an exploratory
13	trench was dug to see what it was. There was
14	more clutter. There was more of the subsurface
15	metal present, and a trench was done to explore
16	that and see what that was.
17	Nothing with any explosive hazard was
18	found in any of the locations shown where
19	trenches are marked on that figure. And if
20	you're looking at a copy of the Proposed Plan
21	instead of the slides, this is Figure 5 in the
22	Proposed Plan. So that's available to you there
23	as well.
24	Again, the next slide is summarizing
25	for the figure results shown on slide 14, the

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Page 14 results that came out of all that remedial 1 2 investigation data that was gathered. Only 3 munitions debris again. As I said, nothing with 4 an explosive hazard was identified. And the 5 places -- a lot of the places had other debris. 6 It was non-munitions related metal. 7 There were 227 different single points 8 that were hand dug with hand tools, and then all 9 of those rectangular trenches that are shown on 10 that figure were also dug. 11 Also, I wanted to point out that from 12 the sampling that was collected in the three 13 ponds, there was no evidence that any release of those munitions constituents had occurred to the 14 15 sediment in the ponds. If there's anything else 16 to point out on the remedial investigation 17 results, because those three slides were a really quick summary of a lot of data that's 18 19 gathered together for you in that entire RI 20 report, that's also available to you. 21 Moving to the next phase that we looked at in the overview slide of all of the work that 22 23 goes into a Military Munitions Response Program, 24 CERCLA investigation, the next three slides will 25 be talking about that feasibility study. That

11/1/2018

	Page 15
1	study comes after the remedial investigation,
2	and it's really taking all that known data, you
3	know, that we've summarized briefly here
4	tonight, all that history, the current site
5	conditions, what we know about the site, and all
6	the data that was gathered, and evaluating it
7	for the appropriate next step and path forward.
8	And as part of the CERCLA process,
9	whatever alternative is being developed that's
10	appropriate is evaluated against those nine
11	criteria that are summarized there. Anything
12	that's proposed, you know, as the future
13	alternative for the site is looked at against
14	each of those criteria to evaluate how well it
15	will address the site conditions.
16	So as part of that feasibility study,
17	this is kind of an overview. The entire project
18	team looked again at all that historical data,
19	all the new data gathered in the remedial
20	investigation, and established that there are no
21	hazards associated with exposure to munitions at
22	this Fuze and Booster Quarry MRS, and there's no
23	potential for any munitions constituents risk
24	either. Neither one; there's no hazard,
25	explosive hazards, and no risk from the MC.

Page 16 1 So the Army, you know, is now 2 presenting in the Proposed Plan that No Further 3 Action is required at the Fuze and Booster Munitions Response Site. And that's what's 4 5 being presented to the public for public comment 6 as part of our meeting here tonight. 7 And, again, I had talked about the 8 criteria that are applied. You know, at the 9 bottom there it's kind of showing that that No 10 Further Action Alternative met all of those criteria that it needed to meet. It's 11 12 technically and administratively implementable 13 and it's protective of the humans and the environment. 14 15 So, again, that was a really quick 16 run-through of a lot of data. So I apologize in 17 advance on that. But for the Proposed Plan, that is what we're here tonight soliciting 18 19 comments from the public on the Proposed Plan 20 document, this is a rundown of the 21 recommendations being made in that Proposed 2.2 Plan. 23 So we're looking at the remedy, the No 24 Further Action that's proposed. We want to present it to you tonight. And it has to be 25

11/1/2018

	Page 17
1	protective of the current and future receptors.
2	When we say receptors, we're talking about the
3	humans that are accessing the site, the humans
4	that are working on that site.
5	So we know that it's used for military
6	training, natural resource management, hunting
7	and fishing, you know, all of the things the
8	facility is normally doing on that five-acre
9	site.
10	And we did want to note as well that,
11	based on everything known about this site, for a
12	theoretical future residential receptor as well,
13	there are no hazards on that Fuze and Booster
14	Quarry site.
15	So, again, this is just kind of a
16	formal statement of everything that is presented
17	in that Proposed Plan for community comment in
18	this 30-day period.
19	I believe we're moving now to the
20	40-millimeter firing range site, the second of
21	the two sites that we're talking about tonight.
22	And that is Ms. Emily Justice.
23	MS. JUSTICE: Hi, everyone.
24	So we're going to talk about the
25	40-millimeter firing range. And the second to

11/1/2018

	Page 18
1	last page in your packet, there's a figure of
2	this site if you want to look at that.
3	So this site was a former firing range
4	built five acres in size located in the south
5	central portion of the facility. And it was a
6	firing range that was used from about 1969 to
7	1971.
8	The MRS, or Munitions Response Site, it
9	consists of that former firing range and also an
10	overshot area. And the munitions that have been
11	used at this site are 40-millimeter grenades.
12	And both practice versions of the 40-millimeter
13	grenade and 40-millimeter grenades with an
14	explosive element were used historically at this
15	site.
16	And according to a 1978 report, each of
17	the 2,500 rounds that had been fired at the
18	range had been accounted for. There's a target
19	impact area with a well-defined berm about 350
20	meters from the firing point.
21	And if you were to go out there today,
22	all that you would see was a few remnants near
23	the former firing point. There's an old wooden
24	structure there that was used for storage during
25	the firing range when it was in use. There's a

11/1/2018

Page 19 1 gun mount foundation, and there's a chronograph 2 foundation. 3 So this is a figure of the 4 40-millimeter firing range. There's a blue dot 5 here, a blue square, that's the former firing 6 point. This black rectangle, that's the 7 suspected impact area and overshot area. 8 And this site is right adjacent to the 9 Fuze and Booster Quarry that we were just 10 talking about. So there's a steep slope down to the west here and right here you would find the 11 12 Fuze and Booster Quarry. 13 So the red outline on the last slide, that shows 8.55 acres. It's a forested area 14 15 near the firing point. There's tall grasses. 16 Again, MRS, the Munitions Response Site, slopes 17 down in the western part where it goes towards the Fuze and Booster Quarry. 18 19 There's no structures within the site 20 except for the remnants of that old wooden 21 storage shed near the firing point. And once 22 you're on the facility, access to the 23 40-millimeter firing range is unrestricted. 24 So do you guys have a slide in there 25 that says, "Historical investigations" in your

11/1/2018

	Page 20
1	printout packet?
2	MS. GROSS: I think you skipped over
3	it. It was right before the map.
4	MS. JUSTICE: Okay. Good. Thank you.
5	This mouse space bar on here is a
6	little bit sticky. I'm pressing it too many
7	times.
8	I did want to talk about historical
9	investigations that have been done at this site.
10	In 2007, there was a historical records review,
11	and it documented reports from facility
12	personnel that identified potential for military
13	munitions at the site.
14	And then in 2008 there was a site
15	inspection. And that second to last figure that
16	I pointed out earlier in your packet there, that
17	shows the site investigation results.
18	So some meandering paths were done to
19	look around to see what military munitions were
20	on the ground. Those are the yellow lines on
21	that figure. They walked around in the target
22	impact area, the overshot area and near the
23	firing point. And they found MD, or munitions
24	debris, and it was related to the 40-millimeter
25	grenades. They found nose caps and casings, but

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11/1/2018

	Page 21
1	they did not find anything with an explosive
2	hazard during the SI. So they did not find any
3	MEC, munitions of explosive concern.
4	And then they conducted a remedial
5	investigation and feasibility study, which now I
б	can flip forward to. We're back on track now.
7	So at this site we went out and we did
8	some geophysical mapping, looking for metal in
9	the ground. And we did some intrusive
10	investigations where we dug the locations where
11	the metal was located. And then we also
12	performed environmental sampling.
13	Numerous munitions debris was found, so
14	pieces of 40-millimeter grenades, but nothing
15	with an explosive hazard was identified. No MEC
16	was identified. Environmental sampling was also
17	conducted near the firing point and in the
18	impact area.
19	And on this next slide, this next slide
20	shows a picture of what the remedial
21	investigation found. So all these dots on here
22	are locations where they found munitions debris
23	or pieces of 40-millimeter grenades.
24	The red dots were concentrated
25	subsurface munitions debris. The yellow dots
	1450
----	--
1	are individual places where they found
2	subsurface munitions debris. And there's a
3	couple blue dots on there where they found some
4	munitions debris on the ground surface.
5	So, again, there was no MEC or items
6	with explosive concern identified during the
7	remedial investigation and only a relatively
8	small quantity of munitions debris was
9	identified. So there's no explosive hazard
10	expected with this site.
11	As for the environmental sampling,
12	nitroguanidine, aluminum, and lead were all
13	detected, but nitroguanidine is not associated
14	with the 40-millimeter grenade. And the metals
15	that were found, the aluminum and lead, they
16	were consistent with what you would find
17	throughout the facility. They were consistent
18	with background concentrations.
19	These were not considered munitions
20	related contaminants, so there's no risk from MC
21	or munitions constituents at the site.
22	After the remedial investigation, we
23	prepared a feasibility study. And this looks at
24	different ways we could address the site moving
25	forward.

11/1/2018

	Page 23
1	So No Further Action was evaluated as
2	an alternative, and we used the nine CERCLA
3	criteria to evaluate the No Further Action
4	Alternative. So we looked at how protective is
5	it, the cost, the feasibility, and all of that
6	information is summarized in the feasibility
7	study.
8	So there's no hazard associated with
9	exposure to military munitions and no explosive
10	hazard, and there's no potential for munitions
11	constituents, MC, from that environmental
12	sampling that we did.
13	No Further Action was selected as a
14	preferred alternative in the feasibility study
15	to be protective of the site, since there was no
16	risk identified.
17	So next up we prepared the Proposed
18	Plan, which we have that on that table and why
19	we're all here tonight. The Proposed Plan looks
20	at the preferred remedy and makes sure it's
21	protective of any receptors at the site, so any
22	humans that might interact with the site.
23	And, again, No Further Action was
24	selected as the preferred alternative to be
25	protective of anyone who uses the site currently

11/1/2018

	Page 24
1	and even a hypothetical future resident. No
2	Further Action would be protective of any and
3	all of those receptors. That's it.
4	MS. VAUGHN: Thanks, Emily.
5	One more note we would like to make
6	before we move into the questions is, we do have
7	all of the members of the project team here that
8	Kevin Sedlak had introduced earlier.
9	And as part of all those phases in our
10	investigation and all the documents prepared for
11	each of the phases is the Ohio EPA reviews and
12	comments on each of those documents.
13	So we have Mr. Nick Roope here today to
14	present to the public that Ohio EPA concurs with
15	these recommendations in the Proposed Plan that
16	are being asked for public comment.
17	So I don't know if Mr. Roope,
18	anything to add?
19	MR. ROOPE: Ohio EPA does concur with
20	the preferred alternatives and No Further Action
21	for both the Fuze and Booster Quarry Munitions
22	Response Site as well as the 40-millimeter
23	Munitions Response Site presented this evening.
24	MS. VAUGHN: Thank you.
25	And then we do have a comment period

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11/1/2018

Page 25 that started October 25th when the Proposed 1 2 Plans were put into the administrative record 3 and at the information repositories, the 4 libraries. And it will go from October 25th 5 through December 1st. And so we're definitely 6 asking for public feedback on the path forward 7 that's been summarized for you tonight. 8 And then there's other ways besides --9 if you ask any question tonight, we need to know 10 your name and have the court reporter take down your questions. That's a requirement under the 11 program we're working under. 12 13 But then you can also e-mail in your comments, write them down on one of the forms 14 15 that we have over on the table over there, hand 16 it in, and your comment will be responded to. 17 If we have any questions, I'll just need to get your name first, please. 18 19 MR. RUPPERT: What range is the 40 20 millimeter, what range do you have for it? 21 MS. VAUGHN: What range, like how far? MR. RUPPERT: No. 22 23 MS. VAUGHN: It's Mr. Ruppert; is that 24 correct? 25 MR. RUPPERT: Yes.

11/1/2018

Page 26 1 MS. VAUGHN: This is Mr. Ruppert. I'11 2 get you the spelling. 3 MR. RUPPERT: Can we reach Russia from 4 here? 5 MS. JUSTICE: Not quite. MR. RUPPERT: They tell me in the north 6 7 part they could reach Russia. 8 MS. JUSTICE: Not with a 40-millimeter 9 grenade. 10 MR. RUPPERT: I know that. But I'm just saying if you have to hit there, what are 11 12 you going to do for it? 13 MS. VAUGHN: That might be outside the scope of the Proposed Plans here tonight. Yeah. 14 15 Thank you, Mr. Ruppert. 16 MR. RUPPERT: I've been through all 17 this. MS. VAUGHN: Yes, sir. I understand. 18 19 MS. JUSTICE: Anyone else with any 20 questions or comments? 21 MS. VAUGHN: Well, we do have more time 22 allotted this evening so we can --23 MS. JUSTICE: We'll all be here if you 24 want to come up and ask anyone a question. But 25 if you would like to formally submit a comment,

11/1/2018

	Page 27
1	please go ahead and grab one of those comment
2	sheets so we can add it to the feedback.
3	MR. RUPPERT: It will be good for each
4	part of the Ravenna Camp. I grew up doing this.
5	I moved here in 1938 when the arsenal was built.
6	MS. VAUGHN: That's great.
7	MR. RUPPERT: And I was privileged to
8	be out there, but not in the arsenal, only
9	because my wife was good friends with the person
10	that ran it. And so we got on the bus and took
11	out there to see what it was like.
12	MS. VAUGHN: Wow.
13	MR. RUPPERT: But that's because her
14	parents were involved in it.
15	Ravenna was a boom town. Newton Falls
16	was a boom town. You couldn't walk downtown on
17	Friday night and Saturday in Ravenna. The bars
18	were filled. We had one building that had rooms
19	at every eight hours they changed
20	MS. VAUGHN: We may come and sit right
21	over there, Mr. Ruppert, and visit for a minute.
22	But I think we'll go ahead and conclude
23	the formal part of the presentation. And then
24	we'll be around for any questions you may have
25	as well though.

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11/1/2018

	Page 28
1	MS. JUSTICE: Thank you all for coming
2	out tonight.
3	(Public meeting concluded.)
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11/1/2018

	Page 29
1	CERTIFICATE
2	
3	
4	I, Grace M. Hilpert-Roach, do hereby
5	certify that as such Reporter I took down in
6	Stenotypy all of the proceedings had in the
7	foregoing transcript; that I have transcribed my
8	said Stenotype notes into typewritten form as
9	appears in the foregoing transcript; that said
10	transcript is the complete form of the
11	proceedings had in said cause and constitutes a
12	true and correct transcript therein.
13	389Y PUBL
14 15	prace M. Hilpert Fonch
16	
17	Grace M. Hilpert-Roach, Notary
18	Public within and for the
19	State of Ohio
20	My commission expires 7-11-2021
20	
21 22	
22	
23 24	
24 25	
20	

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11/1/2018

				rage r
	2:1	22:3	collected 11:21	consists 18:9
A		<b>boom</b> 27:15,16	14:12	constituents
access 11:6,9	appears 29:9	,		
19:22	applied 6:21	<b>Booster</b> 1:7 8:6	collecting 7:8	6:13,16 14:14
accessing 17:3	16:8	8:18,25 9:20	<b>come</b> 4:12 26:24	15:23 22:21
accounted 18:18	appreciate 3:2	11:8 15:22	27:20	23:11
acreage 10:17	4:11	16:3 17:13	comes 15:1	constitutes
<b>acres</b> 9:4,6	appropriate	19:9,12,18	coming 3:3 4:10	29:11
10:16 18:4	15:7,10	24:21	28:1	contaminants
19:14	<b>APTIM</b> 2:11	bottom 12:8	comment 16:5	22:20
acronyms 5:24	3:17 4:23	16:9	17:17 24:16,25	contract 3:18
6:14	<b>area</b> 11:24 18:10	boundary 10:17	25:16 26:25	contractor 3:17
Action 1:4 16:3	18:19 19:7,7	10:22	27:1	controlled 11:7
16:10,24 23:1	19:14 20:22,22	briefly 6:19 8:8	comments 5:14	<b>copies</b> 3:25
23:3,13,23	21:18	12:16 15:3	16:19 24:12	<b>copy</b> 8:23 10:6
24:2,20	<b>areas</b> 12:23 13:8	brightness 10:9	25:14 26:20	10:14 12:12
activities 8:19	<b>Army</b> 2:12,15	<b>building</b> 27:18	commission	13:20
actual 7:6 13:11	2:16 3:7,14	<b>built</b> 18:4 27:5	29:19	<b>cords</b> 4:17
add 24:18 27:2	4:24,25 7:14	<b>buried</b> 11:23	<b>common</b> 6:5,14	<b>Corps</b> 2:16 3:15
address 15:15	16:1	13:1,10	commonly 5:25	4:25
22:24	arsenal 27:5,8	<b>burning</b> 8:19	6:3,22	correct 25:24
addressed 6:25	<b>asked</b> 24:16	<b>bus</b> 27:10	community 1:15	29:12
adjacent 19:8	asking 25:6		7:19 17:17	<b>cost</b> 23:5
administrative	associated 15:21	<u> </u>	complete 29:10	<b>couple</b> 4:21 22:3
9:14 25:2	22:13 23:8	Camp 3:8 27:4	components	course 5:23
administrativ	available 8:17	caps 20:25	6:16,17	<b>court</b> 3:21 5:16
16:12	9:14,18 10:12	case 10:7	concentrated	25:10
advance 16:17	13:22 14:20	casings 20:25	21:24	<b>criteria</b> 15:11,14
agenda 5:4		cause 29:11	concentrations	16:8,11 23:3
ahead 27:1,22	B	<b>center</b> 1:15 7:19	22:18	crossing 10:23
Alabama 2:6	<b>back</b> 4:16,18	central 18:5	<b>concern</b> 6:7,11	current 8:9
allotted 26:22	10:5,7,13 21:6	<b>CERCLA</b> 6:22	21:3 22:6	10:19 11:1
alternative 15:9	background 8:9	6:22,25 14:24	conclude 27:22	15:4 17:1
15:13 16:10	22:18	15:8 23:2	concluded 28:3	currently 23:25
23:2,4,14,24	<b>bad</b> 4:10	CERTIFICATE	<b>concur</b> 24:19	
alternatives	Baltimore 3:16	29:1	<b>concurs</b> 24:14	D
24:20	<b>bar</b> 20:5	certify 29:5	conditions 5:8	<b>data</b> 7:9 11:20
aluminum 22:12	<b>bars</b> 27:17	<b>change</b> 3:9 9:1,5	8:10 10:19	12:9 14:2,18
22:15	<b>based</b> 17:11	changed 27:19	11:2,11 15:5	15:2,6,18,19
Ammunition	behalf 2:2	chemical 6:17	15:15	16:16
7:14	<b>believe</b> 4:5 17:19	chronograph	conducted 21:4	<b>debris</b> 13:4 14:3
anomalies 11:25	<b>berm</b> 18:19	19:1	21:17	14:5 20:24
12:1	<b>best</b> 10:10	circles 12:24	considered	21:13,22,25
anomaly 12:25	<b>bit</b> 20:6	13:7	22:19	22:2,4,8
apologize 16:16	<b>black</b> 19:6	clearly 4:17	consistent 22:16	December 25:5
APPEARAN	blank 5:18	closer 7:24	22:17	Defense 6:24
	<b>blue</b> 13:9 19:4,5	clutter 13:14		definitely 25:5
	1	I	I	1

11/1/2018

Page 2

Department	3:12,13 24:11	<b>figure</b> 9:23 10:4	<b>Friday</b> 27:17	18:13 20:25
6:24	24:14,19	10:11,14 12:14	friends 27:9	21:14,23
detail 8:22 12:21	established	13:19,21,25	front 3:11 4:18	grew 27:4
detected 22:13	15:20	14:10 18:1	<b>Further</b> 1:4 16:2	Gross 2:16 3:15
developed 15:9	evaluate 15:14	19:3 20:15,21	16:10,24 23:1	20:2
different 14:7	23:3	filled 27:18	23:3,13,23	ground 13:12
22:24	<b>evaluated</b> 15:10	final 3:23	23:3,13,23	20:20 21:9
	23:1	<b>find</b> 19:11 21:1	<b>FUSE</b> 1:7	20.20 21.9
<b>dig</b> 12:3,5		21:2 22:16		
discussed 12:17 document 16:20	evaluating 15:6		<b>future</b> 8:12	Guard 2:12,15
	<b>evening</b> 3:1 7:13	<b>fired</b> 18:17	15:12 17:1,12	3:8,14 4:25
documented	24:23 26:22	<b>firing</b> 1:9 8:4	24:1	<b>gun</b> 19:1
13:3 20:11	everybody 3:1	17:20,25 18:3	<b>Fuze</b> 8:6,18,25	<b>guys</b> 19:24
documents 4:1	evidence 14:13	18:6,9,20,23	9:19 11:7	H
9:11 11:16	Exits 4:16	18:25 19:4,5	15:22 16:3	half 9:3
24:10,12	expected 22:10	19:15,21,23	17:13 19:9,12	
<b>doing</b> 3:18 6:4	expires 29:19	20:23 21:17	19:18 24:21	hand 14:8,8
17:8 27:4	exploratory	first 8:2,5 25:18	G	25:15
<b>dot</b> 19:4	13:12	fishing 17:7		handout 7:24
<b>dots</b> 21:21,24,25	explore 13:15	<b>five</b> 9:6 18:4	Garfield 3:8	hazard 13:6,17
22:3	explosive 13:5,6	five-acre 17:8	gathered 12:9	14:4 15:24
<b>downtown</b> 27:16	13:17 14:4	<b>flip</b> 21:6	14:2,19 15:6	21:2,15 22:9
<b>dug</b> 13:2,11,11	15:25 18:14	flows 7:4	15:19	23:8,10
13:13 14:8,10	21:1,3,15 22:6	fluctuates 11:4	gathering 7:9	hazardous 6:8
21:10	22:9 23:9	folks 4:18 9:15	general 7:12,18	hazards 13:5
	explosively 6:8	foregoing 29:7,9	geophysical	15:21,25 17:13
E	explosives 6:7	forested 19:14	11:22 12:3	<b>hear</b> 6:5
e-mail 25:13	6:10	<b>forget</b> 6:15	21:8	heard 6:22
<b>earlier</b> 20:16	exposure 15:21	form 29:8,10	<b>give</b> 5:1	<b>HGL</b> 3:17
24:8	23:9	formal 17:16	<b>go</b> 5:7 8:8 12:2,4	<b>Hi</b> 17:23
early 7:5		27:23	18:21 25:4	highlighted 7:11
eight 27:19	F	formally 5:7,20	27:1,22	Hilpert-Roach
either 15:24	facility 4:12 6:4	26:25	goes 14:23 19:17	1:18 29:4,16
<b>element</b> 18:14	7:13 10:20	former 7:14	<b>going</b> 3:2,4 4:5	historical 7:6
Emily 2:11 4:20	11:7,9 17:8	18:3,9,23 19:5	4:21 11:12	9:17 15:18
8:3 17:22 24:4	18:5 19:22	forms 25:14	17:24 26:12	19:25 20:8,10
Engineers 2:17	20:11 22:17	forth 4:18	<b>good</b> 3:1 20:4	historically
3:15 4:25	Falls 1:16 27:15	forward 8:12	27:3,9	18:14
<b>enjoy</b> 4:6	familiarity 6:2	15:7 21:6	grab 4:1 27:1	history 8:9,25
entire 14:19	far 25:21	22:25 25:6	<b>Grace</b> 1:18 29:4	9:8,19 15:4
15:17	feasibility 10:2	<b>found</b> 10:10	29:16	<b>hit</b> 26:11
environment	14:25 15:16	13:18 20:23,25	grasses 19:15	Hold 5:11
16:14	21:5 22:23	21:13,21,22	gravel 10:22	hours 27:19
environmental	23:5,6,14	22:1,3,15	great 27:6	humans 16:13
21:12,16 22:11	feedback 25:6	<b>foundation</b> 19:1	grenade 18:13	17:3,3 23:22
23:11	27:2	19:2	22:14 26:9	hunting 17:6
<b>EPA</b> 2:13,14	<b>field</b> 7:7	17.2	grenades 18:11	Huntsville 2:6
			8	
L				

11/1/2018

Page 3

	ĺ	I	Ì	I
HydroGeoLogic	items 6:8 22:5	location 1:14	metal 11:23,24	need 9:21 25:9
1:12 2:2 4:20		7:13 12:2,2,25	13:1,10,12,15	25:18
hypothetical	J	locations 13:18	14:6 21:8,11	needed 16:11
24:1	James 3:8	21:10,22	metals 22:14	Neither 15:24
	Johnson 2:14	longer 8:24	meters 18:20	<b>new</b> 15:19
<u> </u>	3:13	look 9:15,23	methodology	<b>Newton</b> 1:16
identified 13:6	<b>joint</b> 3:18	12:20 18:2	12:7	27:15
14:4 20:12	<b>Justice</b> 2:11 4:20	20:19	military 6:20,24	<b>nice</b> 3:3
21:15,16 22:6	17:22,23 20:4	looked 14:21	7:3 9:10 11:14	Nick 2:13 3:12
22:9 23:16	26:5,8,19,23	15:13,18 23:4	14:23 17:5	24:13
impact 18:19	28:1	looking 10:18	20:12,19 23:9	night 3:3 27:17
19:7 20:22	K	13:20 16:23	millimeter 25:20	nine 15:10 23:2
21:18		21:8	<b>mind</b> 5:12	nitroguanidine
implementable	Kathryn 2:15	looks 22:23	<b>minute</b> 27:21	22:12,13
16:12	Katie 3:13	23:19	<b>mount</b> 19:1	non-munitions
included 12:18	<b>Kevin</b> 2:12 3:6	lot 8:15,22 14:5	<b>mouse</b> 20:5	14:6
incremental	4:8 5:11 24:8	14:18 16:16	<b>move</b> 24:6	normally 17:8
12:7	<b>Kim</b> 2:16 3:14		moved 27:5	<b>north</b> 26:6
indicated 13:1	Kimberly 2:3	M	moving 14:21	nose 20:25
individual 22:1	4:19	<b>M</b> 1:18 29:4,16	17:19 22:24	Notary 29:16
information	kind 8:13 10:24	<b>M-E-C</b> 6:10	<b>MRSs</b> 7:20	<b>note</b> 5:14,19 9:1
4:14 5:5 23:6	11:1,10,20	management	munitions 1:5	17:10 24:5
25:3	12:14 15:17	17:6	6:7,10,12,16	<b>notes</b> 29:8
<b>inside</b> 11:8	16:9 17:15	<b>manager</b> 2:4 3:7	6:18,21,24 7:3	November 1:13
inspection 9:22	know 7:7 11:6	3:16	7:17,21 8:6	Numerous 21:13
9:25 10:15	11:10 12:14	<b>map</b> 11:1 20:3	9:10 11:14	
20:15	15:3,5,12 16:1	mapping 21:8	13:4 14:3,14	0
interact 23:22	16:8 17:5,7	<b>maps</b> 8:16 10:6	14:23 15:21,23	occurred 14:14
interest 4:11	24:17 25:9	Mark 2:14 3:13	16:4 18:8,10	<b>October</b> 25:1,4
interesting 3:5	26:10	marked 4:17	19:16 20:13,19	<b>Ohio</b> 1:16 2:13
introduced 24:8	known 8:10 15:2	13:19	20:23 21:3,13	2:14 3:12,13
intrusive 21:9	17:11	materials 5:5	21:22,25 22:2	3:14 24:11,14
investigated 9:3	kvaughn@hgl	13:3	22:4,8,19,21	24:19 29:18
investigation 9:5	2:8	MC 6:13 15:25	23:9,10 24:21	<b>Okay</b> 20:4
10:1 11:13,19	L	22:20 23:11	24:23	old 18:23 19:20
11:21 12:10		<b>MD</b> 20:23		once 11:8 19:21
14:2,16,24	larger 10:14	meandering	<u> </u>	open 8:19
15:1,20 20:17	lead 22:12,15	20:18	name 3:6,9	orientation 7:18
21:5,21 22:7	learn 4:12 libraries 25:4	<b>MEC</b> 6:6,9 21:3	25:10,18	oriented 7:15
22:22 24:10		21:15 22:5	<b>National</b> 2:12,15	originally 8:17
investigations	<b>lights</b> 10:8 <b>lines</b> 20:20	<b>meet</b> 16:11	3:8,14 4:25	9:2
5:9 7:1,5 8:11	listed 9:4 12:17	<b>meeting</b> 1:1 16:6	natural 17:6	<b>outline</b> 19:13
19:25 20:9	little 4:6 20:6	28:3	near 18:22 19:15	<b>outside</b> 26:13
21:10	located 18:4	members 24:7	19:21 20:22	overshot 18:10
involved 27:14	21:11	<b>men's</b> 4:15	21:17	19:7 20:22
item 9:1 12:3	21.11	<b>met</b> 16:10	necessary 5:16	overview 9:8
	l	1	1	I

11/1/2018

				ruge r
14:22 15:17	25:2 26:14	6:25 7:4 9:11	19:4,23 25:19	14:20 18:16
	<b>Plant</b> 7:14	11:15 14:23	25:20,21	reporter 3:21
P	please 25:18	25:12	<b>Ravenna</b> 1:16	5:16 25:10
<b>p.m</b> 1:13	27:1	project 3:7,16	7:14 27:4,15	29:5
package 10:5	point 9:6 12:2	15:17 24:7	27:17	reports 3:20
packet 5:5 12:19	12:22 13:10	proposed 1:4 5:1	reach 26:3,7	9:12,16 11:16
18:1 20:1,16	14:11,16 18:20	5:15 7:10 8:24	really 4:10 14:18	20:11
packets 4:2	18:23 19:6,15	10:4,11 12:11	15:2 16:15	repositories
page 6:2 10:13	19:21 20:23	13:20,22 15:12	receive 5:15	25:3
12:18,19 18:1	21:17	16:2,17,19,21	receptor 17:12	required 5:14
pages 5:19	pointed 20:16	16:24 17:17	receptors 17:1,2	16:3
parents 27:14	<b>points</b> 11:17	23:17,19 24:15	23:21 24:3	requirement
part 5:12 9:4	12:24,25 14:7	25:1 26:14	recommendati	25:11
15:8,16 16:6	pond 11:2 12:24	protective 16:13	16:21 24:15	resident 24:1
19:17 24:9	<b>ponds</b> 8:20,22	17:1 23:4,15	recommended	residential
26:7 27:4,23	10:21 11:3,5	23:21,25 24:2	8:12	17:12
particular 11:7	12:8 14:13,15	public 1:1 5:14	record 9:14 25:2	resource 17:6
path 8:12 15:7	portion 18:5	16:5,5,19	records 7:6 9:18	responded 25:16
25:6	potential 15:23	24:14,16 25:6	9:18 20:10	response 1:5
paths 20:18	20:12 23:10	28:3 29:17	rectangle 19:6	6:21 7:4,17,21
<b>pens</b> 5:18	practice 18:12	<b>put</b> 25:2	rectangles 13:9	8:6 9:10 11:15
performed 8:11	preferred 23:14		rectangular	14:23 16:4
21:12	23:20,24 24:20	Q	14:9	18:8 19:16
<b>period</b> 17:18	prepared 22:23	quantity 22:8	red 7:22 10:17	24:22,23
24:25	23:17 24:10	<b>quarry</b> 1:7 8:6	19:13 21:24	restating 10:25
person 27:9	present 2:10	8:17,18,25	referred 6:23	restoration 3:7
personnel 20:12	4:21 6:18 8:21	9:20 11:8	refreshments	restroom 4:15
phase 7:10 11:21	13:15 16:25	15:22 17:14	4:3	resulted 10:16
14:21	24:14	19:9,12,18	related 14:6	results 5:8 9:24
phases 7:5 9:10	presentation 3:4	24:21	20:24 22:20	12:16 13:25
9:13 11:14,16	4:13 27:23	question 25:9	relatively 22:7	14:1,17 20:17
24:9,11	presented 1:11	26:24	release 14:13	<b>review</b> 9:18
physically 7:8	5:2 16:5 17:16	questions 4:4	relevant 11:17	20:10
picked 3:9 8:23	24:23	5:11,19,20	remedial 10:1	<b>reviews</b> 24:11
<b>picture</b> 21:20	presenting 16:2	24:6 25:11,17	11:13,19,21	<b>RI</b> 14:19
<b>pieces</b> 21:14,23	pressing 20:6	26:20 27:24	12:10 14:1,16	<b>right</b> 4:15 6:10
place 13:10	pretty 3:5	quick 14:18	15:1,19 21:4	10:13,20 11:11
places 14:5,5	printout 20:1	16:15	21:20 22:7,22	19:8,11 20:3
22:1 <b>Plan</b> 7:10 8:24	privileged 27:7	<b>quite</b> 26:5	<b>remedy</b> 16:23	27:20
Plan 7:10 8:24	proceedings	R	23:20	<b>risk</b> 15:23,25
10:4,12 12:11	29:6,11	rainy 3:3	remember 6:6	22:20 23:16
13:20,22 16:2	process 9:5	ran 27:10	9:9	<b>Road</b> 1:16
16:17,19,22	11:18 15:8	range 1:9 8:4	remnants 18:22	roads 10:22,23
17:17 23:18,19	program 5:13	17:20,25 18:3	19:20	room 4:15
24:15 Plans 1:4 5:1 15	5:22 6:19,21	18:6,9,18,25	report 8:23	rooms 27:18
<b>Plans</b> 1:4 5:1,15		10.0,7,10,23		
			1	

11/1/2018

Page 5

<b>Roope</b> 2:13 3:12	Senior 2:4	<b>slide</b> 5:5 7:18,23	<b>submit</b> 26:25	8:15
24:13,17,19	settling 8:21	8:16 9:9,24	subsurface	<b>text</b> 12:11
rounds 18:17	Shearer 1:15	10:3,24 11:20	11:24 13:14	<b>Thank</b> 20:4
<b>RPR</b> 1:18	shed 19:21	12:13,13,15,15	21:25 22:2	24:24 26:15
<b>run</b> 8:2,13	sheets 27:2	12:17 13:24,25	Suite 2:5	28:1
run-through	<b>shorten</b> 6:9,13	14:22 19:13,24	summarized	<b>Thanks</b> 4:8,9
16:16	<b>show</b> 6:3 10:7	21:19,19	10:25 12:11	24:4
rundown 8:24	showed 12:4	slides 6:2 9:25	15:3,11 23:6	theoretical
11:20 16:20	showing 9:24	10:6,14 12:19	25:7	17:12
running 10:22	10:3 16:9	13:21 14:17,24	summarizing	thick 11:3
<b>Ruppert</b> 25:19	<b>shown</b> 7:14,17	<b>slip</b> 6:1,6,15	5:6 13:24	things 12:22
25:22,23,25	7:22 11:1 13:7	<b>slope</b> 19:10	summary 5:1	17:7
26:1,3,6,10,15	13:8,18,25	slopes 11:5	9:17 14:18	think 20:2 27:22
26:16 27:3,7	14:9	19:16	<b>Superfund</b> 6:23	three 8:20 12:8
27:13,21	shows 11:10	small 22:8	sure 3:9 4:1	
<i>,</i>			23:20	14:12,17,24
<b>Russia</b> 26:3,7	12:13 19:14	<b>soil</b> 6:18		<b>time</b> 4:11 9:2
S	20:17 21:20	soliciting 16:18	surface 22:4	11:11 26:21
$\overline{\mathbf{S}}$ 2:3	SI 21:2	<b>solution</b> 10:10	surveying 11:22	times 20:7
s 2.3 safe 13:4	side 7:20	sort 7:20	11:23 12:4	today 3:4 10:20
	<b>single</b> 14:7	south 7:20 18:4	suspected 19:7	18:21 24:13
safety 4:16	sir 26:18	<b>space</b> 20:5	T	tonight 4:21 5:3
samples 7:9	sit 27:20	speak 6:12		5:7 7:10,16 8:1
sampling 12:6,7	site 5:8 6:18 7:4	speaking 8:5	table 3:12 23:18	15:4 16:6,18
12:8 14:12	7:8 8:4,7,8,10	spelling 26:2	25:15	16:25 17:21
21:12,16 22:11	8:14,21 9:21	<b>spoke</b> 6:19	<b>Tait</b> 2:15 3:14	23:19 25:7,9
23:12	9:24 10:15,19	square 2:5 19:5	take 5:14,20 8:3	26:14 28:2
Saturday 27:17	10:19 11:1,8,9	stapled 10:5	25:10	tools 14:8
saying 26:11	11:11 15:4,5	12:19	talk 7:21 9:25	town 27:15,16
says 19:25	15:13,15 16:4	started 3:2 25:1	11:12 17:24	track 21:6
<b>scope</b> 26:14	17:3,4,9,11,14	<b>State</b> 29:18	20:8	training 17:6
searched 9:19	17:20 18:2,3,8	statement 17:16	talked 10:21	transcribed 3:22
searches 7:6	18:11,15 19:8	steep 19:10	16:7	29:7
second 17:20,25	19:16,19 20:9	Stenotype 29:8	talking 4:22	transcript 29:7
20:15	20:13,14,17	Stenotypy 29:6	7:16,25 11:15	29:9,10,12
Section 2:4	21:7 22:10,21	<b>step</b> 15:7	14:25 17:2,21	<b>trench</b> 13:11,13
sediment 14:15	22:24 23:15,21	steps 9:20	19:10	13:15
Sedlak 2:12 3:1	23:22,25 24:22	sticky 20:6	tall 19:15	trenches 13:19
3:6 24:8	24:23	storage 18:24	target 18:18	14:9
<b>see</b> 3:3 7:19,23	sites 1:5 3:4 4:22	19:21	20:21	<b>true</b> 29:12
7:24 9:19	5:2 7:2,16,17	structure 18:24	task 5:17	<b>try</b> 5:22,25
11:23 12:5,23	7:21,25 17:21	structures 19:19	team 15:18 24:7	trying 10:9
13:2,13,16	sitting 3:11	study 10:2 14:25	technically	turned 10:8
18:22 20:19	<b>size</b> 9:2,5,6	15:1,16 21:5	16:12	<b>two</b> 1:5 3:4 4:16
27:11	10:16 18:4	22:23 23:7,14	<b>tell</b> 26:6	5:2 6:14 7:16
selected 23:13	skipped 20:2	<b>stuff</b> 4:2	tend 6:15	7:17,20,25 8:2
23:24	11 -		terms 5:24 6:3	, -,
		l	I	I

11/1/2018

				Page 0
17:21	4:22 5:13,23	21:25	<b>40MM</b> 1:9	
typewritten 29:8	6:4,20 7:1,10		<b>4835</b> 2:5	
	7:16 10:18	Z		
U	11:12 16:18,23		5	
<b>U.S</b> 4:24	17:2,19,21,24	0	<b>5</b> 13:21	
understand	21:6 23:19			
26:18	25:5,12	1	6	
University 2:5	we've 3:11,12,13	11:13	<b>6:30</b> 1:13	
unrestricted	3:25 7:2,5 9:8	12 9:3	<u> </u>	
11:9 19:23	15:3	<b>13</b> 11:20 12:15	7	
<b>use</b> 5:25 6:3,15	weather 4:10	<b>14</b> 12:13 13:25	7 7:23	
12:1 18:25	website 3:23	<b>15</b> 2:5	<b>7-11-2021</b> 29:19	
<b>uses</b> 23:25	9:14,15	<b>1938</b> 27:5	8	
<b></b>	Welcome 4:9	<b>1969</b> 18:6	<b>8.55</b> 19:14	
	well-defined	<b>1971</b> 18:7	0.33 17.14	
various 7:5	18:19	<b>1978</b> 18:16	9	
Vaughn 2:3 4:8	went 13:1 21:7	<b>1st</b> 25:5	<b>9355</b> 1:16	
4:19 24:4,24	west 19:11	2		
25:21,23 26:1	western 10:22	$\frac{1}{22:4}$		
26:13,18,21	19:17	<b>2,500</b> 18:17		
27:6,12,20	wife 27:9	<b>2007</b> 20:10		
vegetation 11:3	<b>women</b> 4:15	<b>2007</b> 20:10 <b>2008</b> 20:14		
<b>venture</b> 3:18	wooden 18:23	<b>2018</b> 1:13		
versions 18:12	19:20	<b>2010</b> 1.15 <b>227</b> 14:7		
<b>visit</b> 27:21	word 12:1	<b>228-5616</b> 2:7		
W	words 6:5 8:15	<b>220</b> -3010 2.7 <b>254</b> 2:7		
walk 27:16	work 3:19 4:19	<b>254</b> 25:1,4		
walk 27.10 walked 20:21	4:20 6:4 7:7			
walking 4:18	14:22	3		
wanking 4.18 want 16:24	workers 7:7	<b>3</b> 10:4,11		
17:10 18:2	working 4:24	<b>30</b> 10:13		
20:8 26:24	5:13,23 6:20	<b>30-day</b> 17:18		
wanted 9:6	7:1,3 17:4	<b>31</b> 12:19		
12:22 14:11	25:12	<b>350</b> 18:19		
Watch 4:17	<b>Wow</b> 27:12	<b>35816</b> 2:6		
water 11:4	write 25:14			
wav 6:23	written 3:19	4		
ways 22:24 25:8	9:12 12:15	<b>4.92</b> 10:16		
we'll 3:22 4:4,6	X	<b>40</b> 25:19		
5:7,20,22 6:9		40-millimeter		
6:12,13 7:21	Y	8:4 17:20,25		
7:25 8:8,13	<b>Yeah</b> 26:14	18:11,12,13		
9:23,25 26:23	years 5:10	19:4,23 20:24		
27:22,24	yellow 12:24	21:14,23 22:14		
we're 3:2,4 4:5	13:6 20:20	24:22 26:8		
L				