Ravenna Army Ammunition Plant Restoration Program

Public Notification and Public Meeting Summary Packet for:

Proposed Plan for Soil, Sediment, and Surface Water at RVAAP-39 Load Line 5
(final version dated December 6, 2016)

Proposed Plan for Soil, Sediment, and Surface Water at RVAAP-33 Load Line 6
(revised final version dated April 12, 2017)

Proposed Plan for Soil, Sediment, and Surface Water at RVAAP-41 Load Line 8
(final version dated March 17, 2017)

Proposed Plan for Soil, Sediment, and Surface Water at RVAAP-44 Load Line 11
(final version dated March 17, 2017)

Public Comment Period: June 12, 2017 to July 12, 2017
Public Meeting: June 27, 2017

Contract No. W912QR-15-C-0046

Prepared for:

US Army Corps of Engineers®

U.S. Army Corps of Engineers
Louisville District

Prepared by:

leidos

Leidos
8866 Commons Boulevard, Suite 201
Twinsburg, Ohio 44087

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PUBLIC NOTIFICATION

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Public Notice

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News Release

For Immediate Release
Contact: Camp Ravenna
Environmental Office

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 Tuesday June 27, 2017 for Army National Guard Release of Proposed Plans for Soil, Sediment, and Surface Water at Load Line 5, Load Line 6, Load Line 8, and Load Line 11

Ravenna – The Army National Guard, in consultation with the Ohio Environmental Protection Agency, submits for public review and comments four (4) Proposed Plans for soil, sediment, and surface water associated with former national defense program activities at the former Ravenna Army Ammunition Plant (RVAAP) in Portage and Trumbull counties, Ohio.

Load Lines 5, 6, 8, and 11 are areas of concern (AOCs) within the former RVAAP in Ravenna, Ohio. These AOCs are being addressed under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The Proposed Plans present the current status and information regarding the AOCs. The Proposed Plans detail the recommendation for No Further Action at each AOC and provide the rationale for these recommendations.

On Tuesday June 27, 2017, 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 AOCs, 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 June 12, 2017 to July 12, 2017. All written comments should be addressed to Camp Ravenna Environmental Office; 1438 State Route 534 SW, Newton Falls, OH 44444.

In accordance with CERCLA, the No Further Action recommendation presented in the Proposed Plans is also presented in earlier remedial investigation (RI) reports. All reports are now available for public review at the RVAAP Information Repository at the Reed Memorial Library (167 East Main Street, Ravenna) and the Newton Falls Public Library (204 South Canal Street, Newton Falls). The reports are also available online at www.rvaap.org.

The final remedy for each AOC 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 June 12, 2017 to July 12, 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 website (www.rvaap.org) or call Katie Tait at 614-336-6136.

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Affidavits

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Public Notices

Notice of Document Availability

Proposed Plans for Load Line 5, Load Line 6, Load Line 8, and Load Line 11 at the Former Ravenna Army Ammunition Plant (RVAAP)

The Proposed Plans for Load Line 5, Load Line 6, Load Line 8, and Load Line 11 each present a recommendation of No Further Action and provide the rationale for this recommendation. These Proposed Plans are now available for public review for 30 days from June 12, 2017 to July 12, 2017.

The Proposed Plans are available at:
Newton Falls Public Library
204 South Canal Street
Newton Falls, Ohio 44444

Reed Memorial Library
167 East Main Street
Ravenna, Ohio 44266

The Proposed Plans are also available at: www.rvaap.org

Please join us for an OPEN HOUSE and PUBLIC MEETING.

The Army will host an information open house and a public meeting to explain the Proposed Plans and the No Further Action recommendation. Oral and written comments will be accepted at the meeting. Written comments may be mailed to the Camp Ravenna Environmental Office; 1438 State Route 534 SW, Newton Falls, OH 44444. Comments will be accepted during the public comment period from June 12, 2017 to July 12, 2017.

The public meeting is scheduled for:
Tuesday June 27, 2017
6:00 pm Open House
6:30 pm Public Meeting
At:
Shearer Community Center (Paris Township Hall)
9355 Newton Falls Road.
Ravenna, OH 44266

For more information or if you need special

THE STATE OF OHIO, SUMMIT COUNTY, ss. } I, Ann Hartman, clerk of THE BEACON JOURNAL PUBLISHING COMPANY, publishers of THE AKRON BEACON JOURNAL, on oath, say that the notice above referenced has been published ONE TIME on the 12th day of June, 2017, OR once a week for ____ consecutive WEEKS on the same day of each week, OR _____ TIMES, commencing on the _____ day of _____, 20__ in said paper printed and published in the City of Akron, County of Summit, State of Ohio, and of general circulation therein, That said newspaper had a bona-fide circulation of more then twenty-five thousand (25,000) at the time of the advertisment was published, and that the price charged in the attached bill for same does not exceed the rates charged for like amount of space to other advertisers who advertise in its display advertising columns.

SIGNED Ann Hartman

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Kimberly J. Anderson
Notary Public, Summit County, Ohio

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Total .....

My Commission Expires 4/2/2020

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Kimberly J. Anderson
Resident Summit County
Notary Public, State of Ohio
My Commission Expires: 04/02/2020

THE STATE OF OHIO
Mahoning County }

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Personally appeared before the undersigned authority, Julie Richardson of THE VINDICATOR PRINTING COMPANY, publishers of THE VINDICATOR, a newspaper printed and of general circulation in Mahoning, Trumbull and Columbiana Counties in Ohio and Lawrence and Mercer Counties in Pennsylvania, and being duly sworn, on h.. oath deposes and says that the notice hereto attached was published 1 times and that insertions were as follows:

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KELLEY I. KURTZ
Notary Public, State of Ohio
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Notice of Document Availability

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6:30 pm Public Meeting

at:

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9355 Newton Falls Road
Ravenna, OH 44266

For more information or if you need special accommodations to attend, please contact Katie Tait at 614-336-6136.

31193993

Proof of Publication
Record Publishing Company
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I, Jessica Whitley being first duly sworn depose and say that I am Advertising Clerk of
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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 1 insertions on the same day of the week from and after the 12th day of June, 2017 and that the fees charged are legal.

J. Whitley

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Elizabeth McDaniel

Elizabeth McDaniel
Notary Public
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Notice of Document Availability

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6:00 pm Open House	(Paris Township Hall)
6:30 pm Public Meeting	9355 Newton Falls Road
	Ravenna, OH 44266

For more information or if you need special accommodations to attend, please contact Katie Tait at 614-336-6136.

#163-1T-June 12, 2017 #3199

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Pamela Eazor

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PUBLIC MEETING

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Sign-in Sheet

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US Army Corps of Engineers
Louisville District

SIGN-IN SHEET

Camp Ravenna Public Meeting – Proposed Plans for Load Line 5, Load Line 6, Load Line 8, and Load Line 11 at the Former Ravenna Army Ammunition Plant (RVAAP)

PLEASE PRINT

LOCATION: Shearer Community Center; Ravenna, OH **DATE: June 27, 2017** **TIME: 6:30 p.m.**

Name	Address/City/State/Zip	Phone	Email
Jeff Thomas	[redacted]		
Barb Tittle			
HEATHER ADAMS			
Sharon Robers			
Amanda Spring			
Rod Banks			
Eli Rogg			
Guy Lanyon			
TOM TADSEN			

CAMP RAVENNA PUBLIC MEETING SIGN-IN SHEET

Proposed Plans for Load Line 5, Load Line 6, Load Line 8, and Load Line 11 at the Former Ravenna Army Ammunition Plant (RVAAP)			
PLEASE PRINT			
LOCATION: Shearer Community Center; Ravenna, OH	**DATE: June 27, 2017**		**TIME: 6:30 p.m.**
Name	**Address/City/State/Zip**	**Phone**	**Email**
Nathaniel Peters	[redacted]		
Bob Princic			
Kathryn Tait			

Presentation

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Proposed Plans for Soil, Sediment, and Surface Water at

Load Lines 5, 6, 8, and 11

Former Ravenna Army Ammunition Plant
Ravenna, Ohio

Presented by:
Heather Adams, P.G. - Leidos

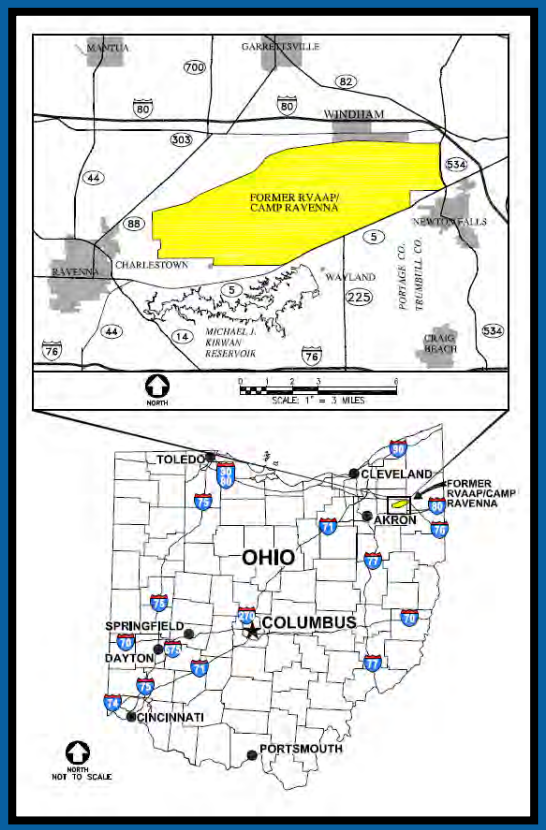
June 27, 2017

Welcome!

Presentation Agenda

- Four Areas of Concern –
  - Load Line 5
  - Load Line 6
  - Load Line 8
  - Load Line 11
- Site Features
- Historical Operations
- Remedial Investigations
- Remedial Investigation Conclusions
- Public Participation
- Questions

Areas of Concern Location

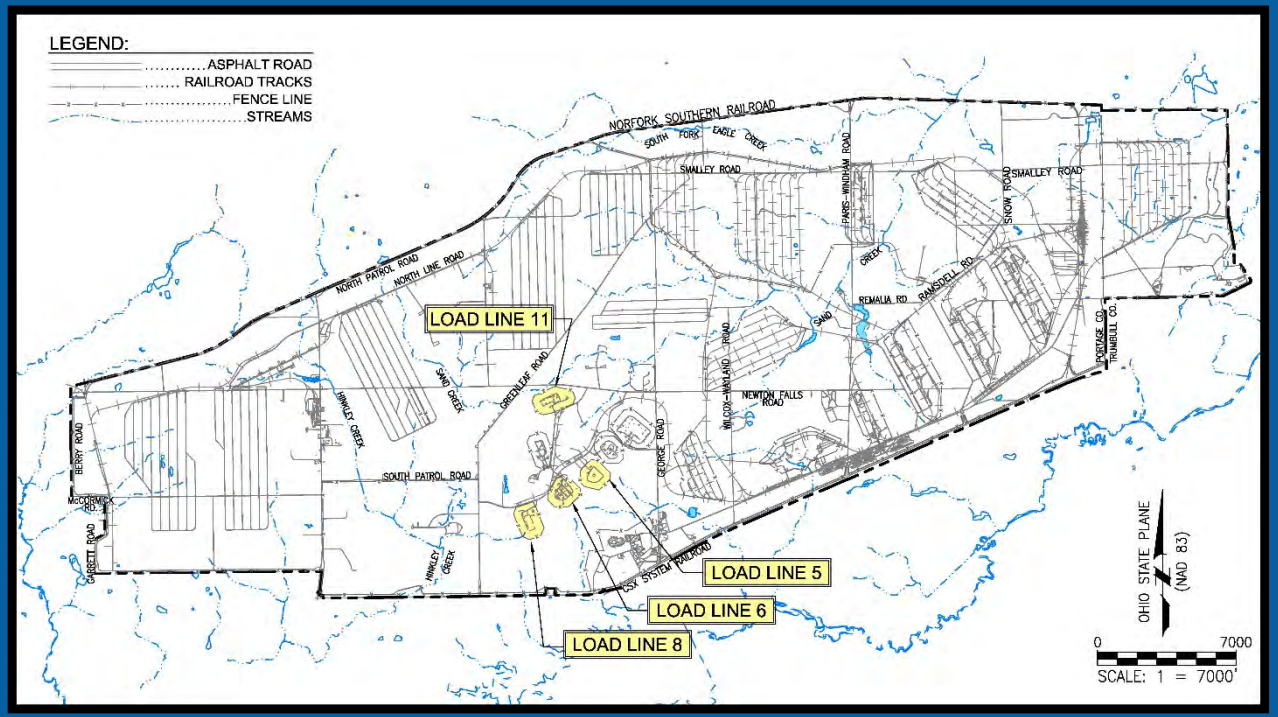


Load Line 5 AOC is RVAAP-39

Load Line 6 AOC is RVAAP-33

Load Line 8 AOC is RVAAP-41

Load Line 11 AOC is RVAAP-44



Load Line 5
Site Features

- Approximately 39 acres
- All buildings, including slabs and foundations, were removed in 2006 and 2007
- Access road and perimeter fence currently exist
- Overgrown with trees and shrubs
- Surface water occurs intermittently as storm water runoff in ditches and three wetlands

Load Line 5
Historical Operations

- 1941–1945, Load Line 5 operated at full capacity as a finished product assembly line to produce fuzes for artillery projectiles.
- All primary explosive products were delivered to Load Line 5 as sealed, finished sub-assemblies (e.g., detonators from Load Line 9).
- Load Line 5 historical buildings included:
  - 13 production buildings
  - 1 heater house
  - 2 change houses
  - 1 paint storage building
  - 1 time clock building
  - 1 service building
- 1945 - Load Line 5 was deactivated permanently and production equipment was removed.
- Load Line 5 was not used for any process other than finished product assembly.
- As of 2007, all buildings, foundations, and slabs have been removed.

Load Line 5
Previous Investigations

- Installation Assessment (USATHAMA 1978)
- RCRA Facility Assessment (Jacobs 1989)
- Preliminary Assessment (USACE 1996)
- Relative Risk Site Evaluation (USACHPPM 1998)

- Remedial Investigations:
  - 2004 Characterization of 14 AOCs (MKM 2007)
  - 2007 Investigation of Under Slab Surface Soils (USACE 2009)
  - 2010 PBA08 RI (USACE 2016)

Load Line 5
Remedial Investigations

- 2004 Characterization of 14 Areas of Concern
  - Collected multi-increment (MI) surface soil (0-1 ft bgs) samples,
    - 17 samples from around former buildings
    - 12 samples from ditches
  - Collected 4 discrete samples for VOC analysis,
  - Collected 7 surface soil quality assurance/quality control (QA/QC) samples,
  - Collected 3 geotechnical samples during monitoring well installation,
  - Excavated 3 test trenches until bedrock or saturated soil was encountered (9-12 ft bgs), and
  - Conducted initial human health and ecological risk screening.

  Conclusions:

  - Recommended full risk assessments be performed to assist in overall management decision for Load Line 5.

Load Line 5
Remedial Investigations (continued)

- 2007 Investigation of Under Slab Surface Soil
  - Investigation completed after the buildings and structures were demolished and removed to identify remaining potential contaminants.
  - Collected 15 ISM surface soil samples (plus 4 QA/QC samples) from the footprints of 13 former production buildings.

  Conclusions:
  - No VOCs, explosives, PCBs, herbicides, or pesticides were detected in surface soil beneath the slabs.
  - Chemicals of Potential Concern (COPCs) identified at Load Line 5:
    - Benz(a)anthracene at Building 1F-12.
    - Chromium was detected at Building 1F-10.

Load Line 5
Remedial Investigations (continued)

- 2010 PBA08 Remedial Investigation
  - Collected additional samples to supplement findings of previous investigations.
    - **Source Area Sampling-**
      - Collected 7 ISM samples in the former production area (FPA)
      - Collected 8 ISM samples in the non-production area (NPA)
    - **Large ISM Sampling-** Collected 12 large grid ISM samples to complete characterization of the AOC.
    - **Subsurface Sampling-** Collected samples from 7 soil borings installed in ISM areas with historical screening criteria exceedances.
    - **Surface Water and Sediment Sampling-** Collected 3 surface water and 4 sediment samples to characterize wetlands and potential surface water pathways.

Load Line 5
Remedial Investigations (continued)

- Remedial Investigation Summary
  - Multiple evaluations and investigations were performed to assess Load Line 5. The total number of samples collected include:
    - 94 surface soil samples,
    - 15 subsurface soil samples,
    - 4 sediment samples,
    - 3 surface water samples,
    - 77 groundwater samples, and
    - Other: 8 water samples and 3 sediment samples from former sumps.
  - The following chemical groups were looked for during the investigations:
    - Metals, explosives, propellants, semi-volatile organic compounds (SVOCs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and pesticides.

Load Line 5
Remedial Investigations Conclusions

- Nature and extent of contamination is defined. No further sampling is required to characterize Load Line 5.
- No further action is required to protect human health.
  - The HHRA did not identify chemicals of concern (COCs) from previous Army activities requiring remediation under CERCLA to be protective of the Resident Receptor.
- No further action is required to protect ecological resources.
  - No risk was identified for important or significant ecological places or resources.
- No further action for soil is required to protect groundwater.
  - The fate and transport assessment determined chemicals in soil are not impacting groundwater.
  - Groundwater will continue to be evaluated under the Facility-wide Groundwater Monitoring Program.

The Army, in coordination with Ohio EPA, is recommending no further action to attain Unrestricted (Residential) Land Use for soil, sediment, and surface water at Load Line 5.

Load Line 6
Site Features

- Approximately 43 acres
- 23 production buildings were thermally decontaminated and demolished in 2002.
- 4 remaining production buildings were demolished between 2005 and 2007.
- All footers and floor slabs were removed to a minimum of 4 ft bgs.
- Access road and perimeter fence currently exist.
- Overgrown with grass, trees, and shrubs.
- Surface water occurs intermittently in ditches and permanently in the Former Test Pond that is approximately 35 ft in diameter and 14 ft deep.

Load Line 6
Historical Operations

- 1941–1945, Load Line 6 operated at full capacity as a finished product assembly line to produce fuzes for artillery projectiles.
- In total, Load Line 5 and Load Line 6 produced approximately 19 million fuzes.
- Load Line 6 historical buildings included:
  - 19 production buildings
  - 1 heater house
  - 3 change houses
  - 1 gate house
  - 1 inert storage building
  - 1 shipping building
  - 1 fire station
- Load Line 6 was deactivated at the end of World War II, and the process equipment was removed.

Load Line 6
Historical Operations (continued)

- 1950–1970 Load Line 6 was used for classified development of missiles and shaped charges for armor penetration.
  - There is little available information regarding the testing activities. Reportedly, the tests were contained, which limited the release of chemicals to the environment.
  - Two buildings at the southern portion of the site were used as testing chambers for missiles.
  - The Former Test Pond was used for underwater testing of shaped charges.
- 1981–1989, Physics International operated a pink water evaporation unit that was closed under the Resource Conservation and Recovery Act (RCRA) regulations in 1989.
- Load Line 6 has not been used since 1989.
- As of 2007, all buildings, foundations, and slabs have been removed.

Load Line 6
Previous Investigations

- Installation Assessment (USATHAMA 1978)
- RCRA Facility Assessment (Jacobs 1989)
- Preliminary Assessment (USACE 1996)
- Relative Risk Site Evaluation (USACHPPM 1996)

- Remedial Investigations:
  - 2002-2003 Phase I Remedial Investigation (MKM 2007)
  - 2010 PBA08 Phase II RI (USACE 2016)

- Military Munitions Response Program
  RI at Firestone Test Facility MRS (CB&I 2014)

Load Line 6
Remedial Investigations

- 2002-2003 Phase I Remedial Investigation
  - Collected 49 surface soil samples and 53 subsurface soil samples,
  - Excavated 5 test trenches until bedrock or saturated soil was encountered (14-15.5 ft bgs),
  - Installed, developed, and sampled 7 monitoring wells,
  - Conducted permeability testing (slug tests),
  - Collected sanitary sewer water samples,
  - Collected samples adjacent to sanitary sewers,
  - Collected geotechnical samples during monitoring well installation, and
  - Surveyed monitoring well locations.

  Conclusions:

  - Extent of contamination was not fully determined.
  - Recommended full risk assessments be performed to assist in overall management decision for Load Line 6.

Load Line 6
Remedial Investigations (continued)

- 2010 PBA08 Phase II Remedial Investigation
  - Collected additional samples to supplement findings of previous investigation.
    - **Source Area Sampling-** Collected 10 surface soil samples to further characterize surface soil.
    - **Subsurface Sampling-** Collected discrete samples from 5 soil borings to further characterize the subsurface soil.
    - **Surface Water and Sediment Sampling-**
      - Collected 4 surface water and sediment samples at exit points and the Fuze and Booster Hill area to characterize current conditions and assess potential exit pathways.
      - Collected 2 surface water and sediment samples from the Former Test Pond.

Load Line 6
Remedial Investigations (continued)

- Phase II Remedial Investigation Summary
  - Multiple evaluations and investigations were performed to assess Load Line 6. The total number of samples collected include:
    - 80 surface soil samples,
    - 66 subsurface soil samples,
    - 12 sediment samples,
    - 16 surface water samples, and
    - 114 groundwater samples.
  - The following chemical groups were looked for during the investigations:
    - Metals, explosives, propellants, semi-volatile organic compounds (SVOCs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and pesticides.

Load Line 6
Remedial Investigations Conclusions

- Nature and extent of contamination is defined. No further sampling is required to characterize Load Line 6.
- No further action is required to protect human health.
  - The HHRA did not identify chemicals of concern (COCs) from previous Army activities requiring remediation under CERCLA to be protective of the Resident Receptor.
- No further action is required to protect ecological resources.
  - No risk was identified for important or significant ecological places or resources.
- No further action for soil is required to protect groundwater.
  - The fate and transport assessment determined chemicals in soil are not impacting groundwater.
  - Groundwater will continue to be evaluated under the Facility-wide Groundwater Monitoring Program.

The Army, in coordination with Ohio EPA, is recommending no further action to attain Unrestricted (Residential) Land Use for soil, sediment, and surface water at Load Line 6.

Load Line 8
Site Features

- Approximately 44 acres
- Buildings, slabs, foundations, and wood frame walkways were demolished and removed in 2006.
- Access road and perimeter fence currently exist
- Overgrown with grass, trees, and shrubs
- Surface water occurs intermittently as storm water runoff in ditches and five wetlands

Load Line 8
Historical Operations

- 1941–1945, Load Line 8 operated at full capacity as a finished product assembly line to produce booster charges for artillery projectiles.
- Approximately 44 million boosters were produced while Load Line 8 was in operation.
- Load Line 8 historical buildings included:
  - 12 production buildings
  - 2 heater house
  - 3 change houses
  - 1 time clock building
  - 1 inert storage building
  - 1 shipping building
- Load Line 8 was deactivated at the end of World War II, and the process equipment was removed.
- 1969–1971, Load Line 8 was reactivated for melt-pour operations and assembly and has not been used for any other operations since 1971.
- As of 2006, all buildings, foundations, and slabs have been removed.

Load Line 8
Previous Investigations

- Installation Assessment (USATHAMA 1978)
- Preliminary Assessment Screening of Boundary Load Line Areas (USAEHA 1994)
- Relative Risk Site Evaluation (USACHPPM 1996)

- Remedial Investigations:
  - 2004 Characterization of 14 AOCs (MKM 2007)
  - 2007 Investigation of the Under Slab Surface Soil (USACE 2009)
  - 2010 PBA08 RI (USACE 2016)

Load Line 8
Remedial Investigations

- 2004 Characterization of 14 AOCs
  - Collected 16 multi-increment (MI) surface soil (0–1 ft bgs) around former buildings and 2 samples from dry drainage ditches,
  - Collected 6 MI sediment (0-0.5 ft bgs) samples from wet ditches,
  - Collected 6 surface water samples from wet ditches,
  - Collected 4 surface soil quality assurance/quality control (QA/QC) samples,
  - Collected 3 geotechnical samples during monitoring well installation, and
  - Excavated 6 test trenches until bedrock or saturated soil was encountered (10.2-12.5 ft bgs).

  Conclusions:
  - Extent of contamination was not fully determined.
  - Recommended full risk assessments be performed to assist in overall management decision for Load Line 8.

Load Line 8
Remedial Investigations (continued)

- 2007 Investigation of Under Slab Surface Soil
  - Investigation completed after the buildings and structures were demolished and removed to identify remaining potential contaminants.
  - Collected 13 ISM surface soil samples (plus 4 QA/QC samples) from the footprints of the 12 former production buildings.

Conclusions:

- No VOCs, explosives, PCBs, herbicides, or pesticides were detected in surface soil beneath the slabs.
- Chemicals of Potential Concern (COPCs) identified at Load Line 8:
  - Two SVOCs, benz(a)anthracene and benzo(b)fluoranthene at Building 2B-21.
  - PCB-1254 at Building 2B-4,
  - Nickel at Building 2B-5, and
  - Chromium at Building 2B-12.

Load Line 8
Remedial Investigations (continued)

- 2010 PBA08 Remedial Investigation
  - Collected additional samples to supplement findings of previous investigations.
    - **Source Area Sampling-**
      - Collected 3 ISM samples around former ISM sample areas that exceeded screening criteria to further define the lateral extent of contamination.
      - Collected 6 ISM samples in the FPA
      - Collected 9 ISM samples in the NPA
    - **Large ISM Sampling-** Collected 13 large grid ISM samples to complete characterization of the AOC.
    - **Subsurface Sampling-** Collected soil samples from 8 soil borings to further characterize the vertical extent of potential contamination.
    - **Surface Water and Sediment Sampling-** Collected 3 co-located surface water and sediment samples to assess potential exit pathways from Load Line 8.

Load Line 8
Remedial Investigations (continued)

- Remedial Investigation Summary
  - Multiple evaluations and investigations were performed to assess Load Line 8. The total number of samples collected include:
    - 80 surface soil samples,
    - 20 subsurface soil samples,
    - 12 sediment samples,
    - 12 surface water samples,
    - 63 groundwater samples, and
    - Other: 12 water samples and 9 sediment samples from former sumps.
  - The following chemical groups were looked for during the investigations:
    - Metals, explosives, propellants, semi-volatile organic compounds (SVOCs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and pesticides.

Load Line 8
Remedial Investigations Conclusions

- Nature and extent of contamination is defined. No further sampling is required to characterize Load Line 8.
- No further action is required to protect human health.
  - The HHRA did not identify chemicals of concern (COCs) from previous Army activities requiring remediation under CERCLA to be protective of the Resident Receptor.
- No further action is required to protect ecological resources.
  - No risk was identified for important or significant ecological places or resources.
- No further action for soil is required to protect groundwater.
  - The fate and transport assessment determined chemicals in soil are not impacting groundwater.
  - Groundwater will continue to be evaluated under the Facility-wide Groundwater Monitoring Program.

The Army, in coordination with Ohio EPA, is recommending no further action to attain Unrestricted (Residential) Land Use for soil, sediment, and surface water at Load Line 8.

Load Line 11
Site Features

- Approximately 48 acres
- Building slabs, foundations, footers, basements, and wood frame walkways were demolished and removed in 2001 and 2004–2005.
- Access road and perimeter fence currently exist
- Overgrown with grass, trees, and shrubs. Some forest exists on the western, northern, and eastern boundaries.
- Surface water occurs intermittently as storm water runoff in ditches and in two wetlands

Load Line 11
Historical Operations

- 1941–1945, Load Line 11 operated at full capacity to produce artillery primers.
- Approximately 50 million primers were produced while Load Line 11 was in operation.
- Load Line 11 historical buildings included:
  - 14 production buildings
  - 1 dining hall
  - 2 change houses
  - 1 time clock building
  - 1 inert storage building
  - 1 shipping building
- 1951–1957, Load Line 11 was reactivated to produce primers.
- 1969–1971, Load Line 11 was reactivated to produce fuzes.
- 1971, Load Line 11 was deactivated, all process equipment was removed, and it was not used for any other processes after 1971.
- As of 2005, all buildings, foundations, and slabs have been removed.

Load Line 11
Previous Investigations

- Installation Assessment (USATHAMA 1978)
- RCRA Facility Assessment (Jacobs 1989)
- Preliminary Assessment (USACE 1996)
- Relative Risk Site Evaluation (USACHPPM 1996)

- Remedial Investigation and Removal Action:
  - 2001 Interim Removal Action (MKM 2004)
  - 2000-2001 Phase I RI (MKM 2005)
  - 2010 PBA08 Phase II RI (USACE 2016)

Load Line 11
Interim Removal Action

- 2001 Interim Removal Action

➢ Hot Spot Removal
- 130 cubic yards (CY) of petroleum-contaminated soil from a 30 ft x 30 ft x 8 ft hot spot was excavated and disposed off-site.
- Post excavation samples confirmed the removal of contamination.
- Excavation was backfilled with clean fill.

➢ 6 Ditch Excavations
- 230 CY of sediment from 6 ditches contaminated with metals, VOCs, SVOCs, pesticides, and/or PCBs was excavated and disposed off-site.
- Post excavation samples confirmed the removal of contamination.

➢ 5 Sump Removals
- Removed 5 sedimentation sumps and remaining attached lines were plugged and grouted in place.
- Collection of 15,000 gal of water.
- Post excavation samples confirmed removal of contamination.

Load Line 11
Interim Removal Action

Hot Spot Removal

130 cubic yards (CY) from a 30 ft x 30 ft x 8 ft petroleum-contaminated hot spot was excavated and disposed off-site.

Sump removal

Removal of 5 sedimentation sumps.

Load Line 11
Remedial Investigations

- 2000-2001 Phase I Remedial Investigation and IRA Confirmation Sampling (MKM 2005)
  - Collected surface and subsurface soil, and sediment and surface water, samples,
  - Installed, developed, and sampled 10 monitoring wells,
  - Conducted in-situ permeability testing (slug tests),
  - Collected sanitary sewer water samples,
  - Collected samples adjacent to sumps and sanitary sewers, and
  - Collected geotechnical samples during monitoring well installation.

  Conclusions:

  - Potential risk existed and should be further evaluated.

Load Line 11
Remedial Investigations (continued)

- 2010 PBA08 Phase II Remedial Investigation
  - Collected additional samples to supplement findings of previous investigations.
    - **Source Area Sampling-** Collected 9 discrete samples from ditches downgradient of former operational areas and former buildings to further characterize the surface soil.
    - **Subsurface Sampling-** Collected samples from 10 soil borings to further characterize the subsurface soil.
    - **Surface Water and Sediment Sampling-** Collected 3 co-located surface water and sediment samples and 1 sediment sample from ditches and shallow conveyances within and exiting the AOC.

Load Line 11
Remedial Investigations (continued)

- Phase II Remedial Investigation Summary

➢Multiple evaluations and investigations were performed to assess Load Line 11. The total number of samples collected include:

- 102 surface soil samples,
- 145 subsurface soil samples,
- 15 sediment samples,
- 9 surface water samples,
- 172 groundwater samples, and
- Other: 27 water samples and 8 sediment samples from former sumps.

➢The following chemical groups were looked for during the investigations:

- Metals, explosives, propellants, semi-volatile organic compounds (SVOCs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and pesticides.

Load Line 11
Remedial Investigations Conclusions

- Nature and extent of contamination is defined.
  - 360 yards of contaminated media and 5 sumps were removed. No further sampling is required after collection of confirmation and remedial investigating samples.
- No further action is required to protect human health.
  - The HHRA did not identify chemicals of concern (COCs) from previous Army activities requiring remediation under CERCLA to be protective of the Resident Receptor.
- No further action is required to protect ecological resources.
  - No risk was identified for important or significant ecological places or resources.
- No further action for soil is required to protect groundwater.
  - The fate and transport assessment determined chemicals in soil are not impacting groundwater.
  - Groundwater will continue to be evaluated under the Facility-wide Groundwater Monitoring Program.

The Army, in coordination with Ohio EPA, is recommending no further action to attain Unrestricted (Residential) Land Use for soil, sediment, and surface water at Load Line 11.

Public Participation

Your Comments and Inputs are Appreciated!

- Public participation is an important component of remedy selection.
- The U.S. Army is soliciting input from the community as part of its public participation responsibilities under Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).
- Written comments will be accepted until July 12, 2017.

Questions?

Court Reporter Transcript

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PROPOSED PLANS

FOR SOIL, SEDIMENT AND SURFACE WATER

AT LOAD LINES 5, 6, 8 and 11

FORMER RAVENNA ARMY AMMUNITION PLANT

RAVENNA, OHIO

Presented by:

Heather Adams, P.G. - Leidos

PUBLIC MEETING

Tuesday

June 27, 2017

Paris Township Hall

9355 Newton Falls Road

Ravenna, Ohio 44266

- - -

APPEARANCES:

Barbara Tittle, Facilitator

Heather Adams, P.G.
Leidos
8866 Commons Boulevard
Twinsburg, Ohio 44087

Jed Thomas, PE, PMP
Environmental Engineer
Leidos
8866 Commons Boulevard
Twinsburg, Ohio 44087
330/405-5802
E-mail: jed.h.thomas@leidos.com

ALSO PRESENT:

Rod Beals, Ohio EPA
Kevin Sedlak, USACE
Eli Rogatz, Leidos
Sharon Robers, Leidos
Amanda M. Sprinzl, Leidos

- - -

MS. TITTLE: Welcome, everyone. We are certainly glad to have you here for this public meeting tonight. My name is Barbara Tittle. I am a private resident from Clev -- from Kent, Ohio. I'm glad I remembered where I live.

I am here tonight to serve as the facilitator for this meeting. This public meeting serves as one of several opportunities for public comment on the Army's proposed plans. I am responsible to ensure that everyone who wishes to comment about the proposed plans has an opportunity to do so.

Before we get started, please turn off or silence all electronic devices. There are three emergency exits: In the front, back and side of this auditorium. Please reference the exit signs in case of an emergency.

The ladies' restroom is present in the main hallway where you entered, and the men's rest-room and handicap accessible restrooms are present in the small hallway across from the vending machine.

Please help yourself to the cookies, coffee, water and refreshments.

This public meeting will present the Army's proposed plans for soil, sediment and surface water at four areas of concern within the former Ravenna Army Ammunition Plant. These four areas of concern are Load Line 5, Load Line 6, Load Line 8 and Load Line 11.

Comments received from the public on these proposed plans will be considered when determining a final remedy, which will be documented in site specific Records of Decision. The Records of Decision will include a Responsiveness Summary addressing public comments.

Tonight we have Kevin Sedlak representing the Army, and Rod Beals representing Ohio EPA. The Ohio EPA would like to make an opening remark.

MR. BEALS: Good evening. Rod Beals. I am with the Ohio EPA. Our agency provides regulatory oversight for the environmental cleanups that are being done at the Ravenna Arsenal.

We have reviewed the four proposed plans, in addition to work plans and investigations that have led to their development, and we agree with

the proposed remedies, that no further action is needed for the sites.

MS. TITTLE: Thank you, Rod. In addition, we have a court reporter here to document tonight's meeting.

Our presenter tonight is Heather Adams. Heather is a professional geologist from Leidos, which is a contractor for the Army. Heather will present information regarding the four areas of concern and the Army's proposed plans for these four sites.

Following the presentation, we will open the floor for your questions and comments. Heather?

MS. ADAMS: Thank you, Barb.

Welcome, everyone. As Barb mentioned, we will be presenting four areas of concern this evening for the former Army Ammunition Plant. Those are Load Lines 5, 6, 8 and 11. I will start off by discussing each of these AOC's individually. I will present their site features, their historical operations, the remedial investigations that have been completed at each of the sites and the conclusions of those remedial investigations. And then once I have gone through all four of the sites, we will

discuss the public participation and open up the forum for any questions.

For anyone who is not aware, the former Army Ammunition Plant is located right here -- just down the road here in northeastern Ohio. This map shows the four AOC's that we will be discussing this evening. They are located in an area of the facility known as Fuze and Booster Hill, which is located in the southern-central portion of the facility.

The first AOC that I would like to discuss is Load Line 5. It is approximately 39 acres in size. All buildings, including slabs and foundations, were removed in 2006 and 2007. If you look at this poster here -- and just to give everyone a little extra information -- if you do have a hard time seeing this poster, these maps are also included in the proposed plans that are on the table, but I will walk you through the posters nonetheless.

The perimeter fence, which is marked with the red line, still exists at the AOC. And we also have an access road which encircles the interior of the AOC. This particular AOC is overgrown with trees and shrubs, as you can see

in the bottom photograph. And surface water occurs intermittently as storm water runoff in ditches and the three wetlands that are included on the map.

Between 1941 and 1945, Load Line 5 operated at full capacity as a finished product assembly line to produce fuzes for artillery projectiles. All primary explosive products were delivered to Load Line 5 as sealed, finished sub-assemblies.

To support these operations, several buildings existed at Load Line 5 that are listed here: 13 production buildings, 1 heater house, 2 change houses, a paint storage building, a time clock building and 1 service building.

In 1945, Load Line 5 was deactivated permanently and the production equipment was removed. Load Line 5 was not used for any other process other than the finished product assembly. As of 2007, all buildings, foundations and slabs have been removed.

There have been quite a few investigations at Load Line 5 that are listed here. The first four: The initial, on the Installation Assessment, the RCRA Facility Assessment, Preliminary Assessment and Relative Risk Site

Evaluation were sort of the first investigations that gave us some of our background information about Load Line 5 and some of the initial characterization information.

The Remedial Investigation is comprised of three individual investigations. The first was the 2004 Characterization of AOCs -- 14 AOCs, the 2007 Investigation of Under Slab Surface Soils and the 2010 PBA08 RI.

I will discuss each of these individually. During the 2004 Characterization of 14 AOCs, they collected multi-incremental surface soil samples at 17 locations around former buildings, and 12 from ditches within the AOC.

They also collected 4 discrete samples for volatile organic compound analysis. They collected 7 surface soil quality assurance and quality control samples, 3 geotechnical samples during monitoring well installation. They also excavated 3 test trenches until bedrock or saturated soils were encountered, which was typically 9 to 12 feet below ground surface. They also conducted an initial human health and ecological risk screening.

The conclusions of this investigation

recommended a full risk assessment be performed to assist in the overall management decision for Load Line 5.

The next investigation was the 2007 Under Slab Surface Soil Investigation, which was completed after the buildings and structures were demolished and removed to identify any remaining potential contaminants. They collected 15 ISM surface soil samples, plus 4 QA/QC samples from the footprints of the 13 former production buildings.

The conclusion of this investigation is as follows: No VOCs, explosives, PCBs, herbicides or pesticides were detected in any of the surface soil beneath the slabs. Two chemicals of potential concern were identified for Load Line 5. They were benz(a)anthracene at Buildings -- at Building F -- I am sorry -- 1F-12, just down here. (Indicating) And chromium at F -- 1F-10, which is located directly next to it.

The final investigation for Load Line 5 was the 2010 PBA08 RI. We collected additional samples to supplement the findings of the previous investigations.

In this investigation, we collected 4

different types of sampling. The first, we collected 7 ISM samples in the area known as the former production area. This area is identified within the perimeter road and near the former production buildings. Then we collected 8 ISM samples in the non-production area, which is all of the space out in here, outside of the production area. (Indicating.) Within this area, there was no known production that occurred.

Then, to further characterize the AOC, we collected 12 large grid ISM samples. Those grids encompass this entire fence area, so that every piece of soil within the fence line was characterized. We also characterized the subsurface soil by collecting 7 additional soil borings installed in ISM areas that had historical screening criteria exceedances from the previous investigations.

We collected 3 surface water and 4 sediment samples to characterize the wetlands and potential surface water pathways.

Multiple evaluations and investigations were performed to assess Load Line 5. The total number of samples included in the Remedial

Investigation were 94 surface soil samples, 15 subsurface soil samples, 4 sediment, 3 surface water, 77 groundwater samples and an additional 8 samples -- 8 water samples and 3 sediment samples from the former sumps were collected.

The following chemical groups were looked for during the investigations: Metals, explosives, propellants, semi-volatile organic compounds, volatile organic compounds, polychlorinated biphenyls and pesticides.

The conclusions of the Load Line 5 Remedial Investigation are as follows: Nature and extent of contamination is defined, and no further sampling is required to characterize Load Line 5. No further action is required to protect human health.

The Human Health Risk Assessment did not identify chemicals of concern from previous Army activities requiring remediation under CERCLA to be protective of the Resident Receptor.

No further action is required to protect ecological resources. The ecological -- the Ecological Risk Assessment determined that no risk was identified for important or significant ecological places or resources.

Finally, no further action for soil is required to protect groundwater. The Fate and Transport Assessment determined chemicals in soil are not impacting groundwater. Additionally, groundwater will continue to be evaluated under the Facility-wide Groundwater Monitoring Program.

Therefore, the Army, in coordination with the Ohio EPA, is recommending no further action to attain Unrestricted Residential Land Use for soil, sediment and surface water at Load Line 5.

The next area of concern that I would like to discuss is Load Line 6. You can see it here in this poster. (Indicating.) It is approximately 43 acres. 23 production buildings were thermally decontaminated and demolished in 2002. The remaining 4 production buildings were demolished between 2005 and 2007.

All footers and floor slabs were removed to a minimum of 4 feet below ground surface. Similar to Load Line 5, the access road here, and the perimeter fence are still intact at Load Line 6. This AOC is also overgrown with grass, trees and shrubs. Surface water occurs intermittently in ditches and permanently in the

Former Test Pond that is approximately 35 feet in diameter and 14 feet deep.

Sorry. I can't see that far away. There it is. (Indicating.) So the Test pond that I was discussing is right there.

Between 1941 and 1945, Load Line 6 operated at full capacity as a finished product assembly line to produce fuzes for artillery projectiles.

In total, Load Line 5 and Load Line 6 produced approximately 19 million fuzes. To support this operation, the following buildings were present at Load Line 6: 19 production buildings, 1 heater house, 3 change houses, 1 gate house, 1 inert storage building, 1 shipping building and a fire station.

Load Line 6 was deactivated at the end of World War II, and the process equipment was removed.

Then between 1950 and 1970, Load Line 6 was used for classified development of missiles and shaped charges for armor penetration. There is little -- there is little available information regarding these testing activities. Reportedly, the tests were contained, which limited the release of chemicals to the environment.

Two buildings at the southern portion of the site were used as testing chambers for missiles, which are located just north of the pond. The Former Test Pond was used for underwater testing of shaped charges. The little pond right there. (Indicating.)

Then between 1981 and 1989, Physics International operated a pink water evaporation unit that was closed under the Resource Conservation and Recovery Act, also known as RCRA, in 1989.

Load Line 6 has not been used since 1989. And as of 2007, all buildings, foundations and slabs have been removed.

Similarly, there has been multiple investigations at this load line. The Installation Assessment, the RCRA Facility Assessment, the Preliminary Assessment and the Relative Risk Site Evaluation.

Two investigations support the Remedial Investigation. Between 2002 and 2003, there was a Phase I Remedial Investigation. Then in 2010, the PBA08 Phase II RI was completed.

After that, the Military Munitions Response Program also completed an RI at the Firestone

Test Facility MRS. The Firestone Test Facility MRS is marked by the brown hashing. And that includes the missile chamber buildings and the pond.

The Phase I RI collected 49 surface soil samples and 53 subsurface soil samples. They excavated 5 test trenches until bedrock or saturated soil was encountered, which was typically 14 to 15.5 feet below ground surface.

They installed, developed and sampled 7 monitoring wells. They conducted permeability testing, collected sanitary sewer water samples, and collected samples adjacent to the sanitary sewers. Geotechnical samples were collected during the monitoring well installation. And the survey of the monitoring well locations was reported.

The conclusions of the Phase I RI are that the extent of contamination was not fully determined. And they recommended full risk assessment be performed to assist in the overall management decision for Load Line 6.

Then in 2010, the PBA08 Phase II RI was completed. We collected additional samples to supplement the findings of the previous

investigations. This included the collection of 10 surface soil samples to further characterize surface soil, 5 borings to further characterize subsurface soil. We collected 4 surface water and sediment samples at exit points of the AOC and the Fuze and Booster Hill area to characterize the current conditions and assess any potential exit pathways. We also collected 2 surface water and sediment samples from the Former Test Pond.

Multiple evaluations and investigations were performed to assess Load Line 6. The total number of samples collected and included in the Phase II RI are as follows: 80 surface soil samples, 66 subsurface soil samples, 12 sediment samples, 16 surface water and 114 groundwater samples.

During these investigations the following chemical groups were looked for: Metals, explosives, propellants, semi-volatile organic compounds, volatile organic compounds, polychlorinated biphenyls and pesticides.

The Remedial Investigation conclusions for Load Line 6 are the following: Nature and extent of contamination is defined. No further sampling

is required to characterize Load Line 6. No further action is required to protect human health.

The Human Health Risk Assessment did not identify chemicals of concern from previous Army activities requiring remediation under CERCLA to be protective of the Resident Receptor.

No further action is required to protect ecological resources. The Ecological Risk Assessment determined that no risk was identified for important or significant ecological places or resources.

Finally, no further action for soil is required to protect groundwater. The Fate and Transport Assessment determined that chemicals in the soil are not impacting groundwater.

Additionally, groundwater will continue to be evaluated under the Facility-wide Groundwater Monitoring Program.

Therefore, the Army, in coordination with the Ohio EPA, is recommending no further action to attain Unrestricted Residential Land Use for soil, sediment and surface water at Load Line 6.

Okay. The next AOC that I will discuss is Load Line 8. It is approximately 44 acres. The

buildings, slabs, foundations and wood frame walkways were demolished and removed in 2006. The access road and the perimeter fence still exist. This is the access road, and the perimeter fence is in red. (Indicating.)

Similar to the other two, this AOC is overgrown with grass, trees and shrubs. And surface water occurs intermittently as storm water runoff in ditches and at the 5 wetlands throughout the AOC.

Between 1941 and 1945, Load Line 8 operated at full capacity as a finished product assembly line to produce booster charges for artillery projectiles. Approximately 44 million boosters were produced while Load Line 8 was in operation.

To support these operations, the following buildings were located at Load Line 8: 12 production buildings, 2 heater houses, 3 change houses, 1 time clock building, 1 inert storage area building and a shipping building.

Load Line 8 was deactivated at the end of World War II, and the process equipment was removed. Then during 1969 and through 1971, Load Line 8 was reactivated for melt-pour operations and assembly, and has not been used for any other

operations since 1971. As of 2006, all buildings, foundations and slabs have been removed.

Similar to the previous load lines, the Installation Assessment, the Preliminary Assessment Screening of Boundary Load Line Areas and the Relative Risk Site Evaluation are some of the historical investigations that have occurred, that help provide the background information and some initial characterization of Load Line 8.

The Remedial Investigation for Load Line 8 is comprised of three different investigations: The 2004 Characterization of 14 AOCs, the 2007 Investigation of the Under Slab Surface Soils and the 2010 PBA08 RI.

The Characterization of 14 AOCs collected 16 multi-incremental surface soil samples around former buildings and 2 samples from dry drainage ditches. They collected 6 MI sediment samples from wet ditches and 6 surface water samples. Four surface soil QA/QC samples and 3 geotechnical samples were collected during monitoring well installation. They excavated 6 test trenches until bedrock or saturated soils were encountered, which were around 10 feet to

12.5 feet below ground surface at this AOC.

The conclusion of this investigation was that the extent of contamination was not fully determined. They recommended a full risk assessment be performed to assist in the overall management decision for Load Line 8.

Then in 2007, the Investigation of Under Slab Surface Soil was completed after the buildings and structures were demolished and removed to identify any remaining potential contaminants.

They collected 13 ISM surface soil samples, plus 4 QA/QC samples, from the footprints of the 12 former production buildings.

The conclusions of this investigation were that no VOCs, explosives, PCBs, herbicides or pesticides were detected in surface soil beneath the slabs.

However, they did find chemicals of potential concern: 2 SVOCs, benz(a)anthracene and benzo(b)fluoranthene at Building 2B-21, which is this guy up here in the north. (Indicating.) PCB-1254 was found at Building 2B-4, which is the long building right here. (Indicating.) Nickel

at 2B-5, which is this tiny one up here. (Indicating.) It is really hard to see. And then chromium at Building 2B-12, which is down here. (Indicating.)

Then in 2010, the PBA08 RI Investigation was completed and collected additional samples to supplement the findings of the previous two investigations. We collected 3 ISM samples around former ISM sample areas that exceeded the screening criteria to further define the lateral extent of contamination. We collected 6 ISM samples in the former production area, which is the central portion of the AOC where most of the production buildings are located, and 9 ISM samples in the non-production area, which borders the former production area.

We also collected 13 large grid ISM samples to complete the characterization of the AOC. Again, these grid samples were within the entire body of the fence line. We also collected 8 soil borings to further characterize the vertical extent of potential contamination from the surface soil. We collected 3 co-located surface water and sediment samples to assess potential exit pathways from Load Line 8. Those are mostly

located in this area, where the surface water drains the AOC in this direction. (Indicating.)

Multiple evaluations and investigations were performed to assess Load Line 8. The total number of samples collected, that were included in the Remedial Investigation, were 80 surface soil samples, 20 subsurface soil samples, 12 sediment and surface water samples, 63 groundwater samples, and then we also collected 12 water samples and 9 sediment samples from former sumps.

The following chemical groups were looked for during these investigations: Metals, explosives, propellants, semi-volatile organic compounds, volatile organic compounds, polychlorinated biphenyls and pesticides.

The Remedial Investigation conclusions for Load Line 8 are as follows: Nature and extent of contamination is defined and no further sampling is required to characterize Load Line 8. No further action is required to protect human health.

The HHRA did not identify chemicals of concern from previous Army activities requiring remediation under CERCLA to be protective of the

Resident Receptor.

No further action is required to protect ecological resources. The Ecological Risk Assessment determined that no risk was identified for important or significant ecological places or resources.

Finally, no further action for soil is required to protect groundwater. The Fate and Transport Assessment determined chemicals in soil are not impacting groundwater. Groundwater will continue to be evaluated under the Facility-wide Groundwater Monitoring Program.

The Army, in coordination with Ohio EPA, is recommending no further action to attain Unrestricted Residential Land Use for soil, sediment and surface water at Load Line 8.

The last of the four AOCs that I will present is Load Line 11. It is approximately 48 acres in size. Building slabs, foundations, footers, basements and wood frame walkways were demolished and removed in 2001 and again between 2004 and 2005.

Similar to the other three, the access road is still in existence, and the fence line, which is the road line, is still in existence. This

AOC is overgrown with grass and trees and shrubs. There is dense forest that exists in the western, northern and eastern boundaries of the AOC. Surface water occurs intermittently as storm water runoff in ditches and in the two wetlands located at the AOC.

Between 1941 and 1945, Load Line 11 operated at full capacity to produce artillery primers. Approximately 50 million primers were produced while Load Line 11 was in operation.

To support this operation, Load Line 11 had the following buildings: 14 production buildings, 1 dining hall, 2 change houses, 1 time clock building, an inert storage building and 1 shipping building.

Between 1951 and 1957, Load Line 11 was reactivated to produce primers. And then again in 1969 through 1971, it was reactivated to produce fuzes. In 1971, Load Line 11 was deactivated. All process equipment was removed and it was not used for any other process after 1971. As of 2005, all buildings, foundations and slabs have been removed.

The investigations that have been completed at Load Line 11 are the Installation Assessment,

the RCRA Facility Assessment, the Preliminary Assessment and the Relative Risk Site Evaluation.

Load Line 11 is a little bit unique compared to the previous three areas of concern. This AOC had a Remedial Removal Action that was completed during the Phase I RI. The Interim Removal Action occurred in 2001, and the Phase I RI was completed between 2000 and 2001. Then, finally, in 2010, the PBA08 Phase II RI was completed.

So the Interim Removal Action was completed concurrent with the Phase I RI. So as they were completing the Phase I RI, they identified contamination that needed to be addressed through an Interim Removal Action.

Three types of removal action occurred: A Hot Spot Removal, excavation at six ditches and the removal of five sumps.

I will summarize each of those removal actions now: 130 cubic yards of petroleum-contaminated soil from a 30 foot by 30 foot, 8 foot deep hot spot was excavated and disposed off-site. Post excavation samples confirmed the removal of the contamination. The excavation was then backfilled with clean fill.

Then 230 cubic yards of sediment from six ditches contaminated with metals, volatile organic compounds, semi-volatile organic compounds, pesticides and/or polychlorinated biphenyls were excavated and disposed off-site. Post excavation samples confirmed the removal of the contamination at the six ditches.

Next they removed 5 sedimentation sumps and any remaining attached lines were plugged and grouted in place. During the removal of the sumps, 15,000 gallons of water was collected. Post excavation samples were also collected to confirm the removal of contamination at the five sump locations.

Here are some photographs of the Interim Removal Action that was completed at Load Line 11. The top left is the Hot Spot Removal, which removed the 130 cubic yards of petroleum-contaminated soil. And the bottom photograph is one of the sumps that was one of the five sumps that was removed.

So as I mentioned, the Interim Removal Action was completed concurrent with the Phase I RI between 2000 and 2001. That investigation collected surface and subsurface soil, sediment

and surface water samples.

They installed, developed and sampled 10 monitoring wells. They conducted in-situ permeability testing. They collected sanitary sewer water samples, samples adjacent to the sumps and sanitary sewers. And they also collected geotechnical samples during the monitoring well installation. The conclusion of the Phase I RI was that potential risk existed and should be further evaluated.

And then in 2010, we completed the PBA08 Phase II Remedial Investigation. This included the collection of additional samples to supplement the findings of the previous investigations and removal action and confirmation samples.

The Phase II RI included the collection of 9 discrete samples from ditches downgradient of former operational areas and former buildings to further characterize the surface soil. We collected 10 soil borings to further characterize the subsurface soil. We collected 3 co-located surface water and sediment samples and 1 sediment sample from ditches and shallow conveyances within and exiting the AOC.

Again, multiple evaluations and investigations were performed to assess Load Line 11. The total number of samples collected and included in the Phase II RI are as follows: 102 surface soil samples, 145 subsurface soil samples, 15 sediment and 9 surface water samples, 172 groundwater samples and 27 water samples and 8 sediment samples from the former sumps.

The following chemical groups were looked for during these investigations: Metals, explosives, propellants, semi-volatile organic compounds, volatile organic compounds, polychlorinated biphenyls and pesticides.

The conclusions of the Load Line 11 RI are as follows: Nature and extent of contamination is defined. 360 yards of contaminated media and 5 sumps were removed. No further sampling is required after collection of the confirmation samples and the remedial investigation samples.

No further action is required to protect human health. The Human Health Risk Assessment did not identify chemicals of concern from previous Army activities requiring remediation under CERCLA to be protective of the Resident Receptor.

No further action is required to protect ecological resources. The Ecological Risk Assessment determined no risk was identified for important or significant ecological places or resources.

The Fate and Transport Assessment determined chemicals in soil are not impacting groundwater. And groundwater will continue to be evaluated under the Facility-wide Groundwater Monitoring Program.

Therefore, the Army, in coordination with the Ohio EPA, is recommending no further action to attain Unrestricted Residential Land Use for soil, sediment and surface water at Load Line 11.

That concludes the presentation for the four areas of concern.

Now we would like to discuss the public participation, which is a very important component of the remedy selection.

The U.S. Army is soliciting input from the community as part of its public participation responsibilities under Section 117(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, known as

CERCLA.

Written comments will be accepted until July 12, 2017. And we also have written comment cards on the back table that you can write your comments and put them in the box.

We will open the forum for questions.

MS. TITTLE: Thank you, Heather, for your excellent presentation.

After that excellently detailed presentation, if you have any questions at all, now is the time to ask. And if you do want to ask a question, just come to the microphone, state your name and where you live, and we will see if we can find an answer for you.

MR. TADSEN: It is a dirty job, but someone has to do it.

MS. TITTLE: Absolutely.

MR. TADSEN: You can direct this to whoever is appropriate.

MS. TITTLE: If you would, for the record, please state your name and where you live. Thank you, sir.

MR. TADSEN: Okay. My name is Tom Tadsen from Franklin Township.

This same verbiage is carried throughout

these different investigations -- different site investigations. And it says "No VOCs, explosives, PCBs," yada yada, "were detected in subsurface soil beneath the slabs."

Does that mean there was zero detection of all of those, or is there a possibility that it was below reportable levels or acceptable detection levels?

MS. ADAMS: If it were -- if it was not detected, then it would have been below both the reporting limits for the instrument -- the machine that was running the test.

The other chemicals that were identified as COPCs, or chemicals of potential concern, were detected, but were below a screening criteria that we are concerned with.

MR. TADSEN: Okay. A couple of different load lines in here have chromium detected.

MS. ADAMS: Uh-hum.

MR. TADSEN: Was there a commonality in function among the various buildings in these different load lines that had chromium in there, and was it hexavalent

chromium?

MS. ADAMS: I may defer part of this to our Human Health Risk Assessor, who did the screening for the chromium, but I believe we did the total chromium concentration.

MS. ROBERS: We did both. All of the samples that were analyzed for metals were analyzed for total chromium. And then we analyzed a subset for both total and hex chrome to determine whether or not there was hex chrome at the site.

And I believe that all of these sites, the conclusion was that there was not -- that the total chrome was not really there as hex chrome. So it was evaluated as the less toxic type. But we did speciate a few samples to find out if hex chrome was there.

MR. TADSEN: Okay. The only other thing, and I will put this in as a formal recommendation, too. I suggest that, in future presentations, when you are doing multiple locations, that you include a full sheet drawing -- a plan form drawing of the individual sites, because it is a lot easier to try to figure out exactly what you are talking about

when you are laser pointing at them, if we have got that reference out here.

MS. ADAMS: Include it in the slide packet, you mean?

MR. TADSEN: Yes.

MS. ADAMS: Okay.

MR. TADSEN: Thank you very much.

MS. ADAMS: If you do want to reference anything, they are -- the figures are in the back of the proposed plans, if there is something you do want to look at. But that is a helpful suggestion. Thank you.

MR. TADSEN: Okay. Thank you very much.

MS. ADAMS: Thank you.

MS. TITTLE: Does anyone else have any other questions?

MR. TADSEN: Tom Tadsen, Franklin Township, again.

What are the interim land use controls that are used in these sites?

MS. ADAMS: For the four that we presented?

MR. TADSEN: Right. Yes.

MS. ADAMS: They have achieved -- achieved the Unrestricted Residential Land Use.

MR. TADSEN: So there are no land use controls required?

MS. ADAMS: Correct.

MR. TADSEN: What about the monitoring wells? They will be there for a --

MS. ADAMS: They will be further assessed under the Facility-wide Groundwater Monitoring Program. And the conclusions of that investigation are included in a different form, or will be in the future.

MR. TADSEN: Do you mind if I address that same question to Rod?

MS. ADAMS: Sure.

MR. TADSEN: Are those land use controls considering the possibility of tampering with, or vandalism on the monitoring wells, protected under the existing interim land use controls, in your opinion?

MR. BEALS: As was stated, there are no land use controls since it is unrestricted land use. The groundwater investigation will continue. And I assume some

day the majority of the wells will probably be removed, unless there is a monitoring purpose.

I am sure there will be measures to protect remaining wells so that they are not vandalized or tampered with through their lifetime.

MR. TADSEN: Okay.

MR. BEALS: Thank you.

MR. TADSEN: Thanks.

MS. TITTLE: Well, before you sit down, are there any other questions?

MR. TADSEN: I am done now.

MS. TITTLE: For now? That is a lot. Certainly questions are welcome. But if we have no other questions, we can adjourn the meeting.

Thank you all so much for coming this evening. Help yourselves to the cookies and coffee.

(Thereupon, the public meeting was concluded at 7:11 p.m.)

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C E R T I F I C A T E

STATE OF OHIO,)
) SS:
SUMMIT COUNTY,)

I, Jerri Lynn Wheat, a Stenographic Reporter and Notary Public within and for the State of Ohio, duly commissioned and qualified, do hereby certify that these proceedings were taken by me and reduced to Stenotypy, afterwards prepared and produced by means of Computer-Aided Transcription and that the foregoing is a true and correct transcription of the proceedings so taken as aforesaid.

I do further certify that these proceedings were taken at the time and place in the foregoing caption specified, and were completed without adjournment.

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

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

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office at Akron, Ohio on this 6th day of July, 2017.

_____

Jerri Lynn Wheat, Stenographic Reporter and Notary Public in and for the State of Ohio.

My commission expires April 9, 2018.

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Photographs

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Areas of Concern Location
Load Line 5 AOC is RVAAP-39
Load Line 6 AOC is RVAAP-33
Load Line 8 AOC is RVAAP-41
Load Line 11 AOC is RVAAP-44
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Ravenna, Ohio
Presented by:
Heather Adams, P.G. - Leidos
June 27, 2017
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WRITTEN PUBLIC COMMENTS

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No written comments were received during the public notification period.

Oral comments were provided during the public meeting.
The comments and the Army's responses are provided in the public meeting transcript and the site-specific Records of Decision.

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