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**USACE PBOW
RAB MEETING MINUTES
PLUM BROOK ORDNANCE WORKS
9 June 2016**

ATTENDEES

Rick Meadows, USACE Huntington
Lisa Humphreys, USACE Huntington
Paula Watts, USACE Nashville
Ghassan Tafla, Ohio EPA NWDO
Archie Lunsey, Ohio EPA NWDO
John Blakeman, RAB Member
Gil Steinen, RAB Member
Dave Speer, RAB Member
Frank Lytle, RAB Member
Richard Pitsinger, RAB Member
Lee Yeckley, RAB Member

Mike Speer, Community Member
Sharon Barnes, Barnes Nursery
Jarret Barnes, Barnes Nursery
Steve Downey, CB&I
Mike Gunderson, CB&I
Beth Seppala, OTIE
Phil Watts, OTIE
Kelly Steinmetz, OTIE
Lana Wood, OTIE
Helen Owens, OTIE

RAB MEETING AGENDA

- Opening Comments – USACE Huntington District
- Project Updates
 - Reservoir No. 2 Burning Ground RA-C (OTIE)
 - Acid Area 3 RA-C (OTIE)
 - Acid Area 2 RA-C – Final Construction Completion Report (OTIE)
 - Document Status (CB&I)
- Other topics
- Schedule Next Meeting
- Adjourn

This meeting of the PBOW RAB was held on 9 June 2016 in Room 2007 of the Cedar Point Center at Bowling Green State University (BGSU) Firelands in Huron, Ohio. There were six RAB members and three community members in attendance. The remainder of the attendees was comprised of USACE PBOW team members.

OPENING COMMENTS

Rick Meadows, USACE PBOW Project Manager opened the meeting and reviewed the meeting agenda and invited the meeting attendees to introduce themselves.

John Blakeman provided an update on the NASA Open House.

PROJECT UPDATES

Reservoir No. 2 Burning Ground RA-C – Helen Owens, OTIE

Ms. Owens provided an update on the R2BG RA-C. The presentation is included as an attachment to these minutes.

- Project Overview
- Current activities
 - Alkaline hydrolysis
 - Backfilling the excavation
 - Footprint sampling
 - Soil disposal
- Review of the Project Schedule

Acid Area 3 RA-C – Helen Owens, OTIE

Ms. Owens provided an update on the AA3 RA-C. The presentation is included as an attachment to these minutes.

- Project Overview
- Project Status
 - Confirmation sampling is underway
 - Stockpile characterization
 - Stockpile disposal
 - Data management
 - Overview of the excavation expansion
- Review of Project Schedule

Question

When you step out as you have described, and find hot spots, do you then go further out?

Response

Yes and it depends on where the hot spot is. If it is on the floor, we will expand the excavation vertically to 36 inches. If the hot spot is along a wall, we will step out another 10-20 feet to a depth of 36 inches.

Question

When the excavation is all brought back to final grade, will there be a depression there? How will the excavation effect the landscape when it is completed and how will the site be restored?

Response

We have to backfill the excavation, so we'll bring in clean backfill. The soil will be placed adjacent to the excavation and a bulldozer will be used to "push" the soil into the open pit, and at the same time, compact the backfill material as the equipment moves back and forth across the backfilled portion of the pit. The backfilled excavation will be graded so there are no depressions in the backfill and the area will be seeded with the native prairie grass.

Question

How do you know that contamination hasn't leached into the areas below the concrete foundations?

Response

The remaining foundations go well below the scoped 36-inch depth of the excavation. Also, during the RI, samples were collected below the 36-inch depth and PCB contamination was not detected at levels which posed a risk to human health and the environment. That doesn't

mean samples were collected from below the foundations, but results of samples collected >36-inch depth indicated no PCB concentrations which posed a risk.

Acid Area 2 RA-C – Construction Completion Report – Helen Owens, OTIE

Ms. Owens presented the final Construction Completion Report for the Acid Area 2 RA-C. The presentation is included as an attachment to these minutes. The presentation included the following topics:

- Project Overview
- Project Highlights
- Risk Summary
- Excavation
- Stockpile Characterization
- Soil Disposal
- Site Restoration
- Project Photographs

Question

Where did the backfill soil come from?

Response

The backfill soil was purchased from Barnes Nursery. The soil was sampled based on a grid of 300 cy sections. Samples were collected from three intervals: 0-10 ft, 10-20 ft and 20-28 ft.

Question

(Referencing the Risk Summary table in the presentation the attendee inquired about the units of measure, mg/kg) Specifically, these are milligrams of what?

Response

This mg/kg is milligrams of PCBs.

Question

Do PCBs dissipate over a number of years?

Response

PCBs do not dissipate.

Lisa Humphreys, USACE Technical Coordinator, advised the draft AA2 Project Closeout package was submitted to Ghassan Tafla at Ohio OEPA on 8 June 2016. Mr. Tafla will review the submittal and provide a concurrence letter to USACE upon acceptance.

Document Status – Mike Gunderson, CB&I

Mr. Gunderson provided an update on the documents currently under review and his presentation is included as an attachment to these minutes.

- WWTP 1&3
 - Final Decision Document (DD) submitted 9 May 2016
- Ash Pit Nos. 1 & 3
 - Final DD submitted 6 April 2016
 - PCO signed 2 May 2016
- Powerhouse No. 2 Ash Pit
 - Final DD submitted 18 April 2016
 - PCO submitted for LRL signature 23 May 2016

- WWTP No. 2
 - No Action Proposed Plan for sewer lines was issued 22 February 2016
 - NASA has agreed to assume responsibility for WWTP No. 2 area
 - Draft DD anticipated in August 2016
- Red Water Ponds Areas
 - Army HQ approval of final DD 3 June 2016
 - Final DD issued for Ohio EPA approval 6 June 2016
- Acid Area 1
 - Final DD issued for Army HQ approval 5 May 2016
- Garage Maintenance Area
 - Internal draft Proposed Plan (PP) under USACE review
 - Anticipate draft PP for Ohio EPA and RAB review August 2016
- Well Abandonment
 - All USACE-owned well abandonment was completed in spring 2016
 - Monitoring well abandonment report is expected in July 2016

OTHER TOPICS/QUESTIONS

John Blakeman, RAB Member inquired as to when the USACE will have completed the remediation efforts on the former ordnance works facility. Rick Meadows, USACE PBOW Project Manager replied that all of the projects are scheduled to be completed by 2021.

USACE is planning to make two contract awards by the end of June for remediation activities in Waste Water Treatment Plants 1&3 (WWTP 1&3) and Pentolite Road Red Water Ponds. Lisa Humphreys explained the WWTP 1&3 efforts must be completed by the end of February 2017 due to the presence of the Northern Harrier, an Ohio endangered species.

Rick Meadows outlined the upcoming visit the week of June 20. Folks from the USACE Headquarters office in Washington, DC, the Division office in Cincinnati and the Louisville District office will be visiting the PBOW project site. The reason for the visit is due to the success of the PBOW project. John Blakeman expressed the appreciation of the community stakeholders for USACE's performance on the environmental restoration at PBOW.

Rick Meadows updated the RAB and meeting attendees the Ransom Road Disposal Area (RRDA) project was approved. Project is currently being entered into the USACE project management system.

NEXT RAB MEETING

A site visit is tentatively scheduled for Thursday, 8 September 2016.

MEETING ADJOURNED



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Huntington District



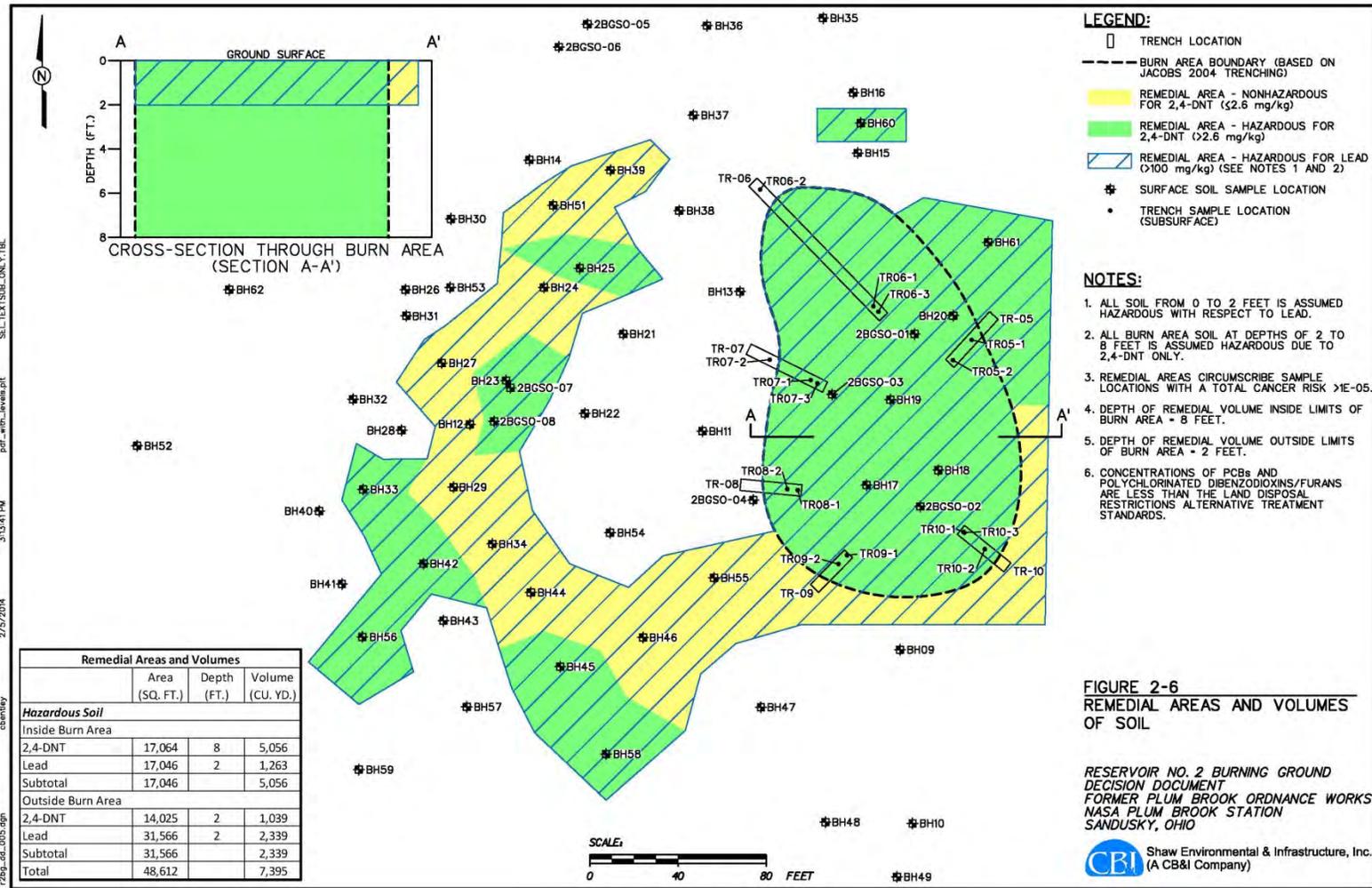
RESERVOIR NO.2 BURNING GROUND

Remedial Action - Construction Plum Brook Ordnance Works Sandusky, Ohio

Oneida Total Integrated Enterprises (OTIE)
Restoration Advisory Board Meeting
9 June 2016



US Army Corps of Engineers Huntington District





PROJECT OVERVIEW

- Excavation
- Characterization
- Treatment
- Disposal



CURRENT ACTIVITIES

- Alkaline hydrolysis
 - Chemical addition and process completed on 1070 cy of soil
 - Windrow disposal sampling
 - pH adjustment – Week of June 13
- Backfilling excavation
- Footprint sampling
 - Stockpile pad
 - Remediation pad
- Soil disposal
 - Approximately 11,800 tons of non-hazardous soil to landfill for use as daily cover



PROJECT SCHEDULE

- Completion of field efforts
 - 31 October 2016
- Draft Construction Completion Report (CCR)
 - 30 November 2016
- Final Construction Completion Report
 - 06 March 2017



US Army Corps of Engineers Huntington District



Questions?



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Huntington District



ACID AREA 3

Remedial Action - Construction Plum Brook Ordnance Works Sandusky, Ohio

Oneida Total Integrated Enterprises (OTIE)
Restoration Advisory Board Meeting
9 June 2016



PROJECT OVERVIEW and STATUS

- Excavation
- Stockpiling
- Stockpile characterization
- Screening/Confirmation sampling
- Disposal
- Data management

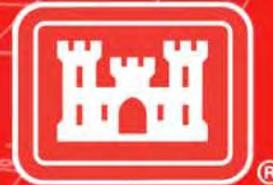


CURRENT ACTIVITIES

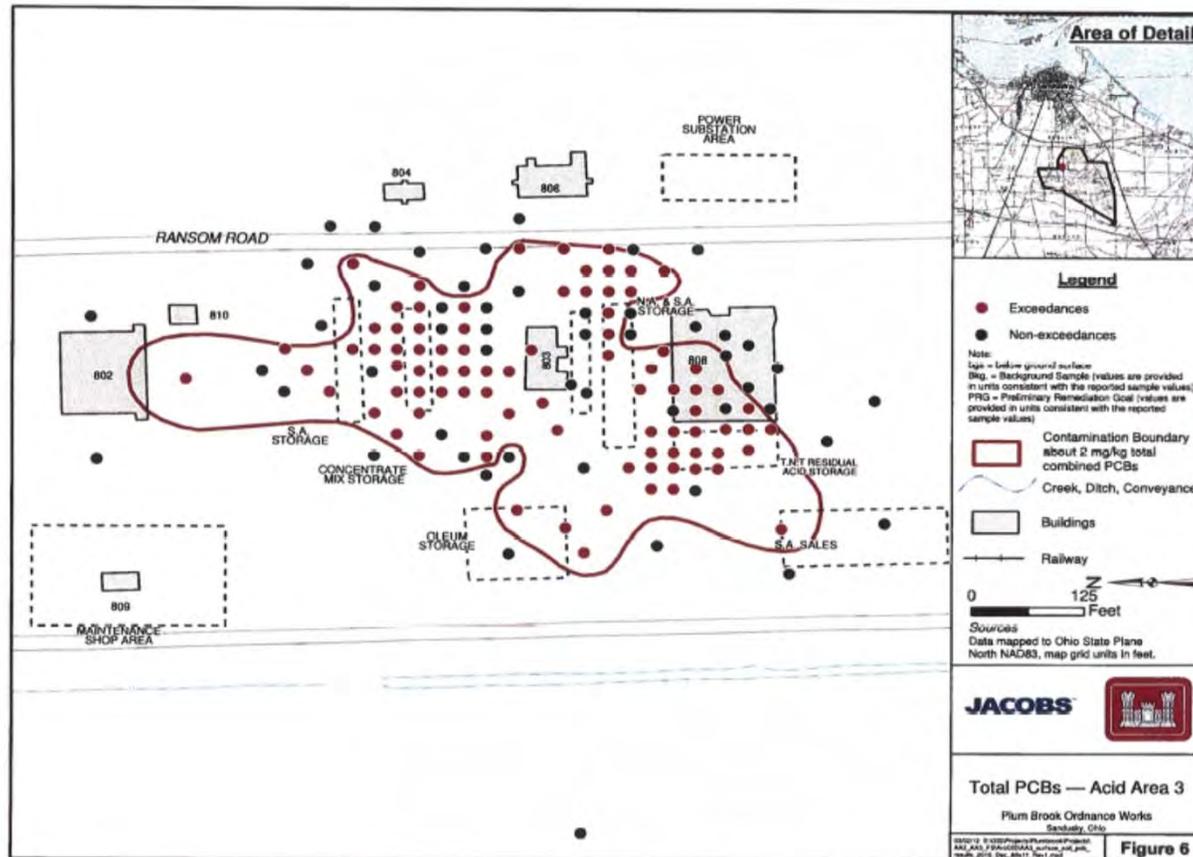
- Confirmation sampling
 - Primary excavation - completed
 - Step-outs to remove “hot-spots”
- Stockpile characterization
- Stockpile disposal
 - Approximately 15,000 tons disposed at landfill for use as daily cover
- Data management



US Army Corps of Engineers Huntington District

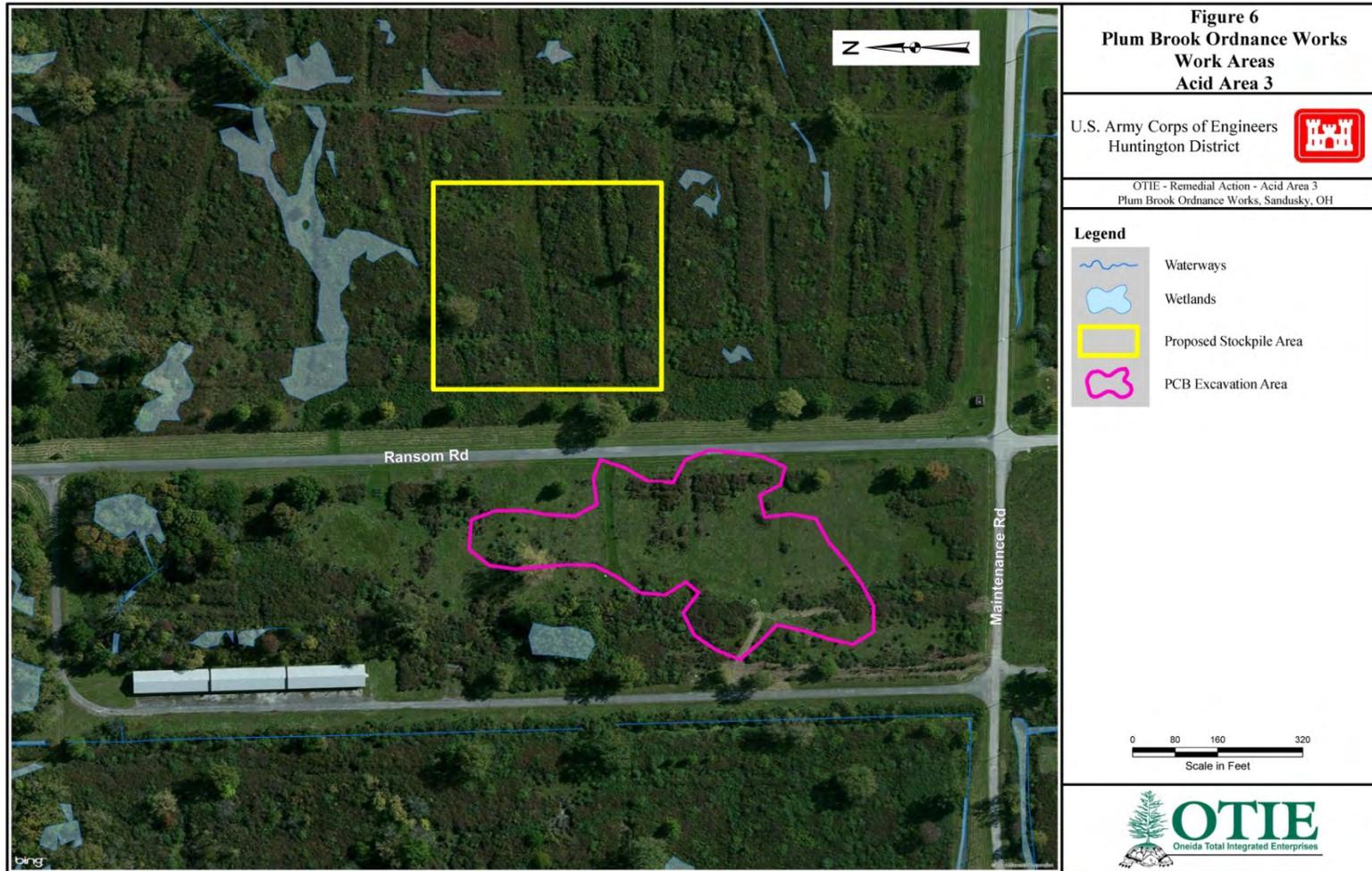


ACID AREA 3





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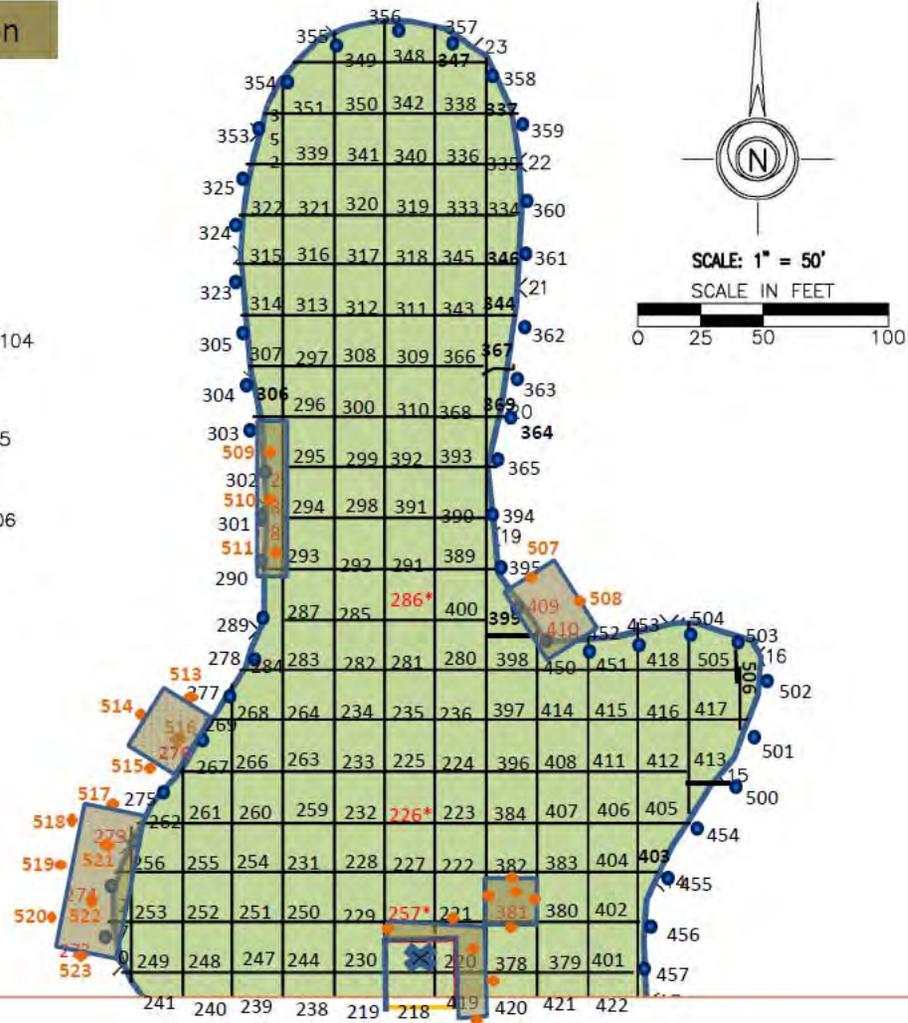
Additional Excavation

000* Location excavated before round 1 sampling complete

Round 2 (C2) samples excavation of "hits"

Wetland stakes

- X102 X103 X104
- X101 X105
- X106
- X100 X99 X97





PROJECT SCHEDULE

- Complete field work
 - 31 September 2016
- Draft Construction Completion Report
 - 31 October 2016
- Final Construction Completion Report
 - 26 February 2017



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Questions?



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Huntington District



ACID AREA 2

Presentation of the Construction Completion Report

Remedial Action - Construction Plum Brook Ordnance Works Sandusky, Ohio

Oneida Total Integrated Enterprises (OTIE)
Restoration Advisory Board Meeting
9 June 2016



PROJECT OVERVIEW

- Excavation
- Characterization
- Disposal
- Site Restoration
- Construction Completion Report



PROJECT HIGHLIGHTS

- Field work was completed in November 2015
- Approximately 10,084 cy was excavated, stockpiled, characterized and surveyed
- 16,717.30 tons of non-hazardous soil was transported and disposed at ECL for use as daily cover
- The excavations were backfilled with 16,283.48 tons of clean backfill from an off-site location.



RISK SUMMARY

| Excavation ID | 1254 mg/kg | 1260 mg/kg | ombined |
|---------------|------------|------------|--------------------|
| Area A | 0.110 | 1.13 | 1.24 |
| Area B | 0.082 | 1.32 | 1.40 |
| Area C | 0.068 | 0.579 | 0.647 |
| Remedial Goal | <1 mg/kg | <2 mg/kg | <2 mg/kg |



AA2 Excavation

- Excavation to remove PCB-contaminated soil (PCB 1254 & 1260)
- Scoped to excavate to 14,189 cy from the three discrete areas (A, B and C)
- Scoped depth of excavation was 36" BGS but with the use of PCB soil screening samples, the depth of the excavations ranged from 18" in Area C to 24" in Areas B and A.

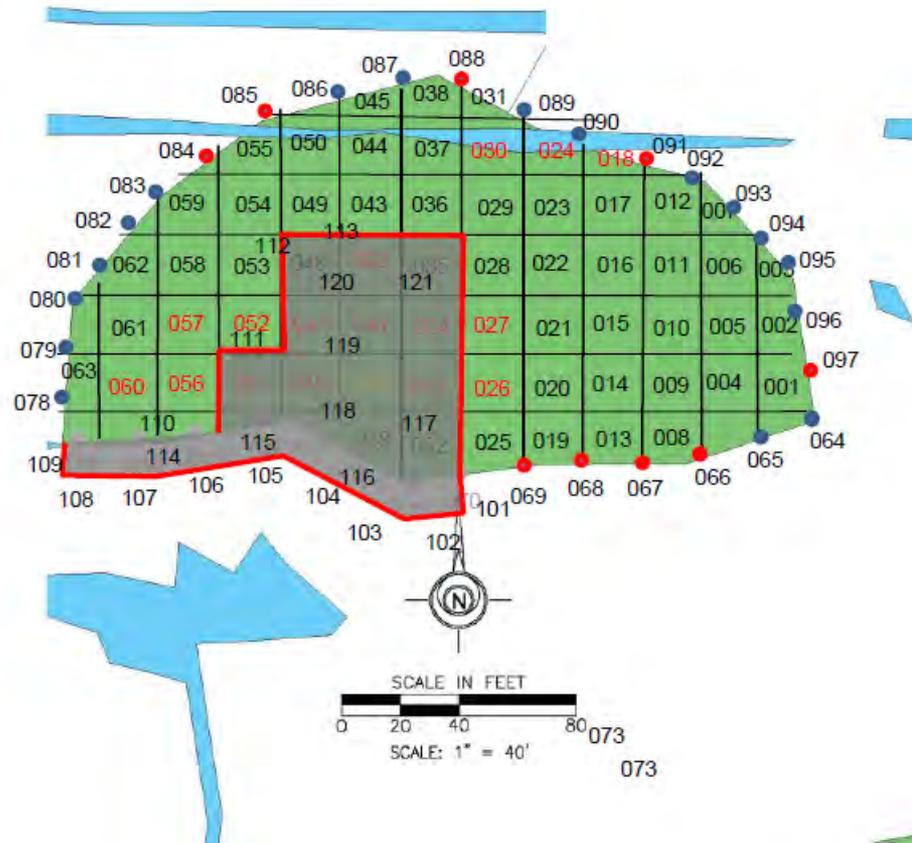


AA2 Excavation (continued)

- Soil screening samples used to determine if the soil along the floor was below the RG.
- The total soil volume not consumed during the excavation due to:
 - Volume was available to expand excavations B and C horizontally and vertically.
 - Soil screening samples collected from floor to verify PCB concentrations at lesser depths were <RG.
 - Concrete foundations were not excavated from the AOC.



AA2 Area B - Additional Excavation

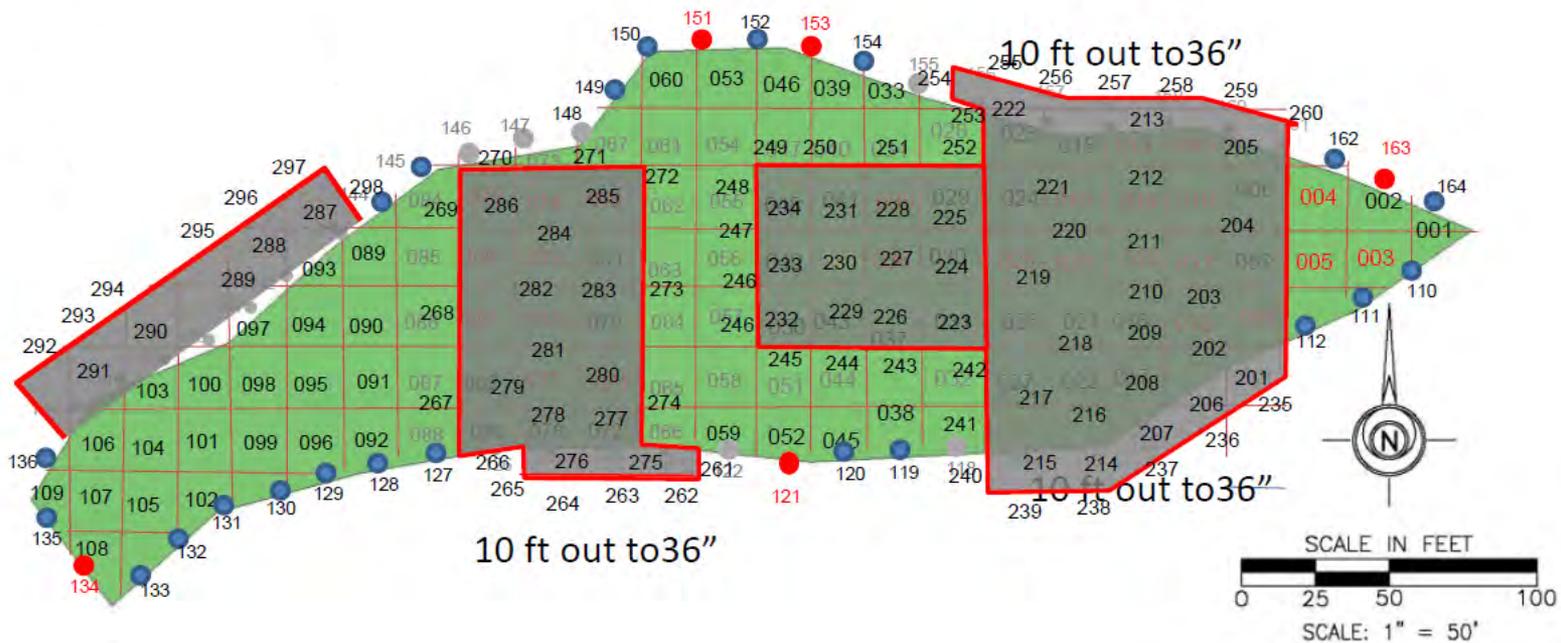




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AA2 Area C - Additional Excavation





AA2 Stockpile Characterization

- Excavated soil was stockpiled into ~300 cy stockpiles.
- Sampled and analyzed to determine:
 - Concentrations of PCB 1254 and 1260
 - Confirm PCB concentration was <50 mg/kg
 - Confirm soil was not hazardous (<TCLP)
- Gulf Coast Analytical Laboratories (GCAL) was the contract laboratory.



AA2 SOIL DISPOSAL

- Results from the soil sample analyses (TCLP and PCB) were summarized and provided to Erie County Landfill for review and approval prior to transport to the landfill facility.



SITE RESTORATION

- After the evaluation of the risk, the excavations were backfilled with “clean” backfill.
- Backfill was sampled and determined to be less than Region 9 screening, background and RGs.
- Each excavation was graded and seeded with native prairie grass.



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05.27.2015



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06.08.2015



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10.15.2015



AA2 Project Crew





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Questions?

PBOW Document Status

Well Abandonment Status

Mike Gunderson

Geologist

CB&I Federal Services

9 June 2016



U.S. ARMY



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BUILDING STRONG®

PBOW Document Status

- ▶ Waste Water Treatment Plant Nos. 1&3
- ▶ Ash Pit Nos. 1&3
- ▶ Powerhouse No. 2 Ash Pit
- ▶ Waste Water Treatment Plant No. 2
- ▶ Red Water Pond Areas
- ▶ Acid Area 1
- ▶ Garage Maintenance Area



BUILDING STRONG®

Final Decision Documents

Waste Water Treatment Plant Nos. 1&3

- ▶ Final DD submitted 9 May 2016

Ash Pit Nos. 1&3

- ▶ Final DD submitted 6 April 2016
- ▶ PCO signed 2 May 2016

Powerhouse No. 2 Ash Pit

- ▶ Final DD submitted 18 April 2016
- ▶ PCO submitted for LRL signature 23 May 2016



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Waste Water Treatment Plant 2

- ▶ Proposed Plan recommending No Action for Sewer Lines was issued 22 February 2016
 - TNTC to WWTP2 Sewer Line and WWTPs Steel Sewer Lines Areas pose no unacceptable risk to human health and the environment
 - NASA has agreed to assume responsibility for WWTP2 Area
- ▶ Internal Draft Decision Document currently in USACE review
 - Draft Decision Document anticipated August 2016



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Red Water Pond Areas

- ▶ Final Decision Document was issued for Army HQ approval 3 February 2016
 - Army HQ approval received 3 June 2016
- ▶ Final Decision document was issued for Ohio EPA concurrence on 6 June 2016 –
Advanced copy submitted 27 April 2016 with minor revisions from HQ provided 16 May 2016



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Acid Area 1

- ▶ Final Decision Document issued for Army HQ approval 5 May 2016



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Garage Maintenance Area

- ▶ Internal Draft Proposed Plan currently in USACE review
 - Draft for Ohio EPA and RAB anticipated August 2016



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Well Abandonment Status

- ▶ 122 USACE monitoring wells abandoned
 - Phase I completed in Fall 2014 to Spring 2015
 - ▷ 53 wells abandoned
 - Phase II completed in Fall 2015 to Spring 2016
 - ▷ 69 wells abandoned
 - Monitoring well abandonment report to be issued July 2016



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