

## RESTORATION ADVISORY BOARD MINUTES

January 9, 2024

The Restoration Advisory Board (RAB) meeting was called to order by Hans Trousil at 9:02 a.m. on 09 January 2024. This meeting was held in person at West Burlington City Hall in West Burlington, Iowa. Hans started off the meeting with Pledge of Allegiance. He then asked Jeff Morrison (Jacobs) how many had called in to the meeting via Teams. Jeff replied we had 8 people online today: Shelly Nellesen (IDNR), Shane Ehlin and Andrea Samson (USACE), Julie Solinski (RAB), Amanda Smith, Brook Ann Thye, Andrew O'Connor and Rose Iannuzzi (Jacobs) were online for today's meeting.

### **Minutes Review**

There were no corrections to the minutes from October 2023, and there were no public comments.

### **Agenda Review**

There were no corrections to January agenda.

### **Environmental Services Update**

Jeff presented an update on the two projects his team is working on: Environmental Services at IAAAP, and the off-post bioremediation project at Operable Unit (OU) - 3.

Jeff shared a slide with a list of the current OUs at IAAAP to remind everyone since those are discussed heavily during these presentations. Jeff addressed an action item from the October 2023 RAB meeting to show an updated plume map of RDX plume.

Jeff provided a feature on the recently approved Final remedial investigation (RI) for OU-6, which included 10 sites within 8 areas:

- Line 1 Ammo LAP (Load, Assemble, and Pack) (CC-IAAP-001G),
- Line 1 Former Wastewater Impoundment (IAAP-016 and IAAP-016G),
- Line 2 Ammo LAP (IAAP-002G),
- Line 3 Ammo LAP (IAAP-003G),
- Line 3A Ammo LAP (IAAP-004G),
- Lines 5A and 5B Ammo Assembly (IAAP-006G),
- Line 9 Ammo LAP (IAAP-010G),
- Line 800 and Pinkwater Lagoon (IAAP-044 and IAAP-044G).

Jeff provided a brief history of OU-6. Several investigations have been conducted at the IAAAP since the 1980s to evaluate the nature and extent of chemicals in site media. The overall objectives of this RI are to update the conceptual site model (CSM) for each site, assess the potential for unacceptable human health risks and hazards and for ecological impacts. To meet the objectives, new and previously collected data were evaluated to assess the potential for a contaminant release. The data were used to assess the nature and extent of contamination, evaluate chemical fate and transport, and estimate potential risks and hazards posed by site-related contamination to human health and the environment. The updated CSM was used to recommend whether a

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Feasibility Study (FS) or a No Further Action (NFA) determination is warranted at each site.

Jeff summarized the risk assessments conducted for OU-6:

- The HHRA identified potential unacceptable risks and hazards for future residential receptors exposed to site-related chemicals in groundwater at nine of the sites.
- The HHRA also identified potential unacceptable risks and hazards in groundwater for future site workers.
- No unacceptable risks and hazards were identified for the construction/utility worker for any of the sites.
- The Ecological Risk Assessment (ERA) concluded that there are no adverse effects to ecological receptors identified, and no additional actions are required from an ecological perspective.

The Recommendations for the sites were the following: Five sites recommended for FS at OU-6 (Line 1, Line 2, Line 3, Line 5A/5B and Line 9), four sites recommended for FS at OU-7 for mixed media (Line 1 Impoundment and Line 800/Pinkwater Lagoon), and one site recommended for OU-11 for No Further Action (Line 3A).

Jeff then updated the team on where the various other Remedial Investigation (RI) reports stand for the Jacobs team:

- OU-7: Submitted Draft RI report to EPA in August.
- OU-10: Finalized RI in November.
- OU-11: Responded to EPA comments on Draft Supplemental RI report. Draft Final was submitted to EPA.
- OU-12: Responding to USACE comments on the internal draft Phase 2 RI Report. Draft report will be submitted to EPA.
- Compliance Cleanup (CC) Program: Under USACE review. Will respond to Army comments on internal draft RFI report for CC-06 (DA/DF sites) to Army.

Jeff updated the team on the status of several in-progress tasks:

- OU-1: Responded to EPA comments on draft Five Year Review Amendment to EPA, and we prepared the associated draft Explanation of Significant Differences (ESD).
- OU-4: EPA approved Final OU-4 Feasibility Study (FS) in November. Prepared internal draft Proposed Plan (PP) and is under USACE review.
- OU-6: Began internal draft FS report in October.

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- OU-10: Submitted internal draft FS report to USACE in December.
- Began planning for OU-3 Sources Brush Creek investigation.

Jeff updated the team about the Site Inspection (SI) that is underway emerging contaminants called per- and polyfluoroalkyl substances (PFAS) at IAAAP:

- Five newly installed monitoring wells and 10 existing monitoring wells were sampled at the former Fire Station, Fire Training Pit (FTP), and the IDA in December 2020
- Received approval from EPA on draft final SI report and finalized SI in December 2021.
- Due to screening level exceedances, additional investigations are recommended at each site and RI planning began in early 2023.
- A fourth area of potential concern (current Fire Station) was included in the revised Final PA report and is being addressed in an SI Addendum.
- Fieldwork at the current Fire Station was conducted in August 2023, with five new monitoring wells installed. One compound (PFBA) was detected at low levels (below risk-based screening levels) at two monitoring wells.
- The internal draft PFAS SI Addendum is being drafted and data are being evaluated.

Jeff then filled the team on the progress of the PFAS RI:

- Technical planning process meeting was held with EPA in May to present the proposed scope for the RI at all four sites (including Current Fire Station).
- Incorporating new laboratory Method 1633 per EPA and DoD guidance.
- Responded to Army comments on Internal Draft QAPP, and Draft will be submitted to Army Center for Excellence next and then EPA.
- RI fieldwork anticipated for summer 2024.
- Draft Uniform Federal Policy Quality Assurance Project Plan (UFP-QAPP) is anticipated for submittal to EPA later this fall, and the RI fieldwork is anticipated for spring 2024.

### **OU-3 Optimized Remedial Action**

Jeff provided an update on the OU-3 Optimized Remedial Action project, which is for the enhanced bioremediation at the off-post RDX plume. He began by presenting a high-level overview of the OU-3 remedy:

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- Record of Decision (ROD) signed in 2005 selected enhanced degradation (ED), monitored natural attenuation (MNA), and land use controls (LUCs) as the remedy for RDX treatment.
- Tetra Tech performed initial ED injections between October 2007 and October 2015. Most recent injections performed by Jacobs in 2022 in the hot spot underneath US Hwy 61.
- Annual GW monitoring conducted by Aerostar (2015-present).
- Monitoring shows plume footprint has been reduced in size by approximately 42%.
- Quarterly performance monitoring conducted by Jacobs (2022-present) on select upgradient wells.

Jacobs is implementing the current OU-3 RA.

- Installation of 20 new injection wells along north and south side of US Hwy 61 completed in Summer 2022.
- Conducted one round of baseline sampling in May 2022 prior to injections in July 2022.
- Conducted fifth round of performance monitoring in October 2023.
- Next performance monitoring event scheduled for January 2024.

Jeff then showed series of figures of the original plume at the time of the ROD, a more recent plume as depicted by Aerostar last year, and then the current overall plume updated with latest Jacobs' bioremediation sampling results as a closeup figure. He showed a table of updated results to date.

- Four wells were sampled in fifth performance monitoring round (Oct 2023): EMW-02, EMW-04, IW-02, MW-309.
- RDX concentrations remain well below 50 ug/L, including historically problematic well MW-309 (from baseline of 130 ug/L to ND in Oct 2023).
- High Total Organic Carbon (TOC) and geochemical trends (depleted nitrate and increased dissolved iron) show sustained reducing conditions, with improvements noted in EMW-02 and EMW-04 compared to Jul 2023.

Julie Solinski asked about the changing PFAS screening levels and how we are handling that? Jeff said we are having to be nimble and shift as PFAS evolves and use the latest screening levels in our reports and workplans as they are being finalized.

Julie also asked what the proposed OU-13 would be. Jeff said that she had touched on it with her previous question, and that PFAS sites may become OU-13. It's not

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formalized yet.

There were no further questions.

### **Annual Off-Post Groundwater & Surface Water Monitoring (OU-3)**

Darlene Abbott of Aerostar presented an update of OU-3 with the latest annual groundwater and surface water data and evaluation of off-post results. She reminded the group that the off-post contaminants that are present are explosives: mainly RDX (royal demolition explosive).

Darlene presented update on OU-3 SW/GW Reporting and shared that her team is planning out there this week (08 Jan 24) for the 2023 annual event (a bit later than usual November timeframe due to contracting issue).

Brush Creek Surface Water Sampling:

- Three surface water sampling locations are monitored monthly (one at IAAAP boundary and two locations near Highway 61): BCOFF-1, BCOFF-6, and BCOFF-3
- Samples are analyzed for explosives constituents.

OU-3 Groundwater Sampling

- Up to 34 monitoring wells are sampled annually.
- Samples are analyzed for explosives constituents.
- GW sampling will continue until RDX concentrations are below the health advisory level (HAL) of 2 micrograms per liter ( $\mu\text{g/L}$ ).

OU-3 Reporting

- Analytical results from surface water and groundwater monitoring activities are summarized and presented in the OU-3 Off-Site Annual Monitoring Report and Sampling & Analysis Plan.

Darlene showed a map of the locations, a chart depicting the latest surface water results, and a table with summary statistics (minimum, maximum, mean concentrations at three SW locations). The conclusions for OU-3 Surface Water are:

- RDX surface water concentrations generally decrease downstream beyond the facility boundary but are regularly above the HAL of 2  $\mu\text{g/L}$ .
- All three surface water sampling locations (BCOFF-1, BCOFF-3, and BCOFF-6) exhibit decreasing RDX concentration trends across all data.
- The average RDX concentration at BCOFF-1 has decreased by more than 2  $\mu\text{g/L}$  since Aerostar began monitoring in 2015. The things that the Army has been doing at IAAAP have made a positive difference in Brush Creek.

She then showed a map with the latest plume depicting the groundwater sampling results. Darlene then presented the OU-3 groundwater conclusions:

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- >2 µg/L RDX plume boundary is approximately the same footprint as last year.
- No wells exhibit RDX concentrations between the 20 and 50 µg/L this fiscal year.
- No wells exhibit RDX concentrations exceeding 50 µg/L this fiscal year.
- RDX is present within the aquifer, with the highest concentrations being along the glacial till interface.

Darlene then presented some Mann-Kendall RDX concentration trend analysis in FY2023 sampled wells (pre-treatment through FY2023):

- EMW-02 exhibits an overall decreasing trend with a confidence of >99.9% across all data. No trend is exhibited for RDX concentrations since 2011.
- EMW-10, IW-01, and SMW-11 exhibit no trend across all data and no trend since 2011.
- MW-303 exhibits an overall decreasing trend with 99.8% confidence. A stable trend is established for RDX concentrations since 2011.
- SMW-08 exhibits no trend across all data but exhibits a decreasing trend since 2011.
- All other wells exhibit decreasing RDX concentration trends or are otherwise unremarkable.

Groundwater and surface water will continue to be monitored until the concentrations are below the HAL (2 µg/L) or until other RDX criteria are established and met.

Jen asked if it was MW-303 is the hotspot? Darlene said no it was MW-309 that is the “problem well” but it was not showing up most recent event.

There were no further questions.

### **FUSRAP Update**

Mike Kessler provided an update on FUSRAP activities. Many of his slides are same as previous RAB meetings, but he does have some updates. He presented the definition of FUSRAP: Formerly Utilized Sites Remedial Action Program to deal with former atomic energy commission radioactive waste. Assigned to Department of Energy (DOE) and then transferred to USACE. FUSRAP is in the final 12-18 months of Remedial Action.

Two OUs assigned: OU1 primarily explosives contaminated soils in Line 1 and West Burn Pads (WBP), while OU8 is for predominantly looking for low level radiation and specifically depleted uranium (DU).

FUSRAP has conducted a significant amount of sampling at IAAAP. Additional remediation is required at Line 1:

- Responses to EPA’s comments to REV B of the Buildings 1-03/1-04, and Clarifiers for Buildings 1-10/1-12 Pre-Design Investigation Report (PDIR) were sent to EPA on 8-NOV. Backchecks are pending.

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- Sampling at Bldg. 1-60 is awaiting completion of a contract modification which will provide funding needed to hire a drilling subcontractor.
- Internal review of REV A of the “Inaccessible & Continuing Sources” Data Summary Report is in progress. A handful of locations they excavated all that they could but couldn’t complete remediation due to structures. This where PDIRs come in. But a couple locations Randy’s team didn’t demo all the buildings. Also had to stop some sign sites due to a continuing source.
- FUSRAP work to award a new contract to remediate at Line 1 remains on hold pending resolution of the IRP v FUSRAP appropriations issue.

OU-8 is the Depleted Uranium (DU) on structures at Line 1 and in soils at the FSA.

- No radiological remediation was required at Warehouse 3-01, or Yards C, G, & L to be protective of the site worker.
- Line 1 Structures remediation is complete.
- RA is complete in the FS-1/2, 3/4/5, and 14 Areas.
- REV A of the PRAR/FSSE is still in internal USACE review.

Firing Sites 6 Area:

- The draft report resulting from the supplemental Archaeological Survey was received 4-DEC and is in internal USACE review.
- The area to Pre-Design Investigation (PDI) has expanded to 175M from the firing pad.
- PDI work is estimated to be 80%\* complete.

Firing Sites 12 Area:

- Marsum Evaluation Reports (MERs) are complete for 4 of the 5 Class II SUs.
- FS-12 is 98.4% Final Status Survey complete.

Mike shared a series of remediation maps of FS-6 and FS-12. Access road is going to be its own survey units. FUSRAP is in the process of completing a GWS Survey of the South Test Fire Site or FS-6. Figure for FS-6 is a hexagon because it’s hard to do GPS in a circle.

Mike then discussed the Q1 2024 Activities completed.

OU-1:

- Continued PDT review of REV A of the OU-1 Line 1 “Inaccessible & Continuing Sources” Data Summary Report.

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OU-8:

- Completed brush clearing at FS-6.
- Collected autumn samples for the 2023 EMDAR.
- Substantially completed remediation work at FS-12 and PDI work at FS-6.
- Completed verification of the FS-12 Class I and Class II SUs.
- Resolved the remaining comment for REV B of the 2022 OU-8 FS-12 SUs PRAR/FSSE. Produced REV 0 for distribution.
- Continued USACE review of REV A of the “2023” OU-8 FS-12 SUs PRAR/FSSE; FS 1-5 & 14 PRAR/FSSE, and the RAD Background Threshold Value reports.
- Continued work on the 2nd FUSRAP OU-8 Five Year Review.

Mike then provided a status update on the progress of the Five-Year Reviews that are ongoing:

- Due 24-MAR-2024
- Separate Five-Year Reviews for OU-1 and OU-8
- There are a number of scheduled activities for DEC – MAR.

Mike then showed a slide with his Q2 2024 Activities Planned.

OU-1:

- Resolve comments received from REV B of the Line 1 Bldgs. 1-03/1-04 + Clarifiers PDIR. Produce REV 0.
- Conclude PDT review of REV A of the OU-1 Line 1 “Inaccessible & Continuing Sources” Data Summary Report.
- Resolve the issue between the FUSRAP and IRP appropriations.

OU-8:

- Complete the PDI GWS work at FS-6.
- Complete T&D of Above RG material from FS-12.
- Complete USACE review of REV A of the “2023” OU-8 FS-12 SUs PRAR/FSSE; FS 1-5 & 14 PRAR/FSSE, and the RAD Background Threshold Value reports.
- Conclude work on the 2nd FUSRAP OU-8 Five Year Review.

Mike presented a slide for the first time of metrics and milestones which he thinks are more useful than goals, with a color coding for whether it was going to be met. For 2024 these were listed as:



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- Award FS-6 Remedial Action Contract (yellow)
- Excavate and Process 6,000 CYs at FS-12 (red)
- Track >RG Shipped with 900 CYs anticipated (green)
- 1 property at RIP at FS-12 (green)
- Transfer the IAAAP Admin Record to DOE-LM (green)
- Complete the 2nd FUSRAP OU-8 Five Year Review (yellow)

Jonathan asked clarification about the red dot for excavation goal. Mike said it was an overestimation and real goal was finishing FS-12. Need to get a contractor in place at FS-6 this year.

There were no further questions.

### **Old Business – Action Items from Previous Last Meeting**

There were actions from last meeting:

- Mike said he is still working on Hans' comment and will present excavating and processing slides at the next RAB mtg when he won't have anything to present at FS-12. Hans said that sounds good.
- Wes is not online to give an update on PFAS regulatory news.
- Jeff and Darlene showed new maps of the OU-3 plume.
- OU-5 cleanup update: Seth said there are three different actions. LUC is still in place. There is not a signed Decision Document (DD) for removal actions even though CTA, PDS north of k road. Contracting issues are underway. An issue arose that load Line 6 munitions are too small to be picked up by the equipment. Seth said they were the size of a pencil eraser. It is being removed from Na'alli work. HGL working on second contract and has draft PP being reviewed by Army and later EPA and can be presented PDS south K road and InDA in that plan. Removal action anticipated in 2025.
- Julie clarified some of the scattering of the detonators was due to explosion out there.

### **Action Items for Today**

- Mike is still working on the total % of DU being removed from the ground.
- Jeff needs to ensure to hit share screen and presentation mode on PowerPoint.
- Julie wants to see Jeff's OU-6 binder. We will bring that again at next meeting.
- Julie asked about the new construction and Jen said they are breaking ground mid-March for new line going in. It will be built up off the ground. Right on top of old Line 800. There will be excavation for building foundations, and they are removing MWs. Jen will bring maps of the new construction and show which wells are being removed.
- Jen said they are still looking for a few more RAB members. Julie asked if Leon Baxter applied since he took an application as the last meeting. Hans thought

Iowa Army Ammunition Plant  
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there was a County Health person that might be interested, and he will check on that.

Next meeting is planned for 16 Apr 2024 at West Burlington City Hall.

Meeting adjourned at 10:16 am.

Original signed by:



Libby Miller  
Secretary

Original signed by:



Hans Trousil  
Community Co-Chair

Original signed by:



Jen Busard  
Army Co-Chair

- Exhibits: 1 Attendees  
2 Agenda  
3 Environmental Services Update  
4 OU-3 Remedial Action Update  
5 FUSRAP Update  
6 Annual SW and GW OU-3 Update

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Exhibit 1

**GOVERNMENT MEMBERS**

**PRESENT (2)**

Jen Busard  
Shelly Nellesen (via Teams)

**RAB MEMBERS PRESENT (2)**

Hans Trousil  
Julie Solinski (via Teams)

**PUBLIC PRESENT (20)**

Jeff Morrison  
Mike Kessler  
Darlene Abbott  
Andrew O'Connor (via Teams)  
Dean Johnson  
Seth Reedy  
Jonathan Harrington  
Greg Rakers  
Rose Iannuzzi (via Teams)  
Paula Bond

Shane Ehlin (via Teams)

Libby Miller  
Jim Romer  
Mindy Johnson  
David Lyerla  
Randy Hansen  
Kane Sherman  
Brook Ann Thye (via Teams)  
Amanda Smith (via Teams)  
Andrea Samson (via Teams)

Total in attendance: 24