

## **RESTORATION ADVISORY BOARD MINUTES**

**January 14, 2025**

The Restoration Advisory Board (RAB) meeting was called to order by Hans Trousil at 9:00 a.m. on 14 January 2025. 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 the following online today: Mindy Johnson (TLI) and Shelly Nellesen (IDNR) for today's meeting.

### **Minutes Review**

There were no corrections to the minutes from October 2024, and there were no public comments.

### **Agenda Review**

There were no corrections to the 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. He first shared a slide with a list of the current OUs at IAAAP to remind everyone since those are discussed heavily during these presentations. Jeff then updated the team on where the various other Remedial Investigation (RI) reports stand for the Jacobs team:

- OU-7: Jacobs submitted responses to comments (RTCs) by EPA on the Draft RI report and provided an updated redline draft in September to EPA.
- OU-12: Jacobs submitted RTCs by EPA on the Draft Phase 2 RI Report and provided an updated redline draft final in November to EPA.
- OU-13: Jacobs submitted RTCs to backcheck comments by EPA on the draft final UFP-QAPP for the PFAS Remedial Investigation in January.
- Compliance Cleanup (CC) Program: Jacobs submitted RTCs and an updated redline draft final of the CC-06 RFI report in November to EPA.

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

- OU-1: Jacobs submitted "show your work" backcheck comment to EPA on the redline draft final Explanation of Significant Differences (ESD) in November.
- The redline draft final Five-Year Review Amendment is still hung up with EPA legal review as well.
- OU-4: Jacobs prepared RTCs to USACE comments and prepared redline draft Record of Decision (ROD) to USACE for backcheck in January. OU-4 will go to Army legal team next and then EPA after.
- OU-4: For RCRA, Jacobs submitted RTCs and redline draft final OU-4 2024 annual groundwater monitoring report to EPA in December.

## RESTORATION ADVISORY BOARD MINUTES

January 14, 2025

- OU-6: Jacobs prepared RTCs to USACE comments and prepared a redline draft FS report to USACE for backcheck in January.
- OU-9: Jacobs submitted RTCs and redline draft final Record of Decision (ROD) to EPA in November.
- OU-10: Jacobs submitted draft FS to EPA in November.
- Jacobs is preparing RTCs to comments by USACE on workplan for OU-3 Sources Brush Creek investigation in January.

Jeff provided a spotlight on the ongoing PFAS investigation and showed several photos from recent mobilization to the four sites in late 2024. Fieldwork was conducted to both finish off Site Inspection (SI) and begin PFAS RI work for the emerging contaminants called per- and polyfluoroalkyl substances (PFAS) at IAAAP.

During the Site Inspection at four Areas of Potential Concern, the following PFAS compounds were detected in groundwater:

- Site Inspection (SI) identified PFAS in groundwater above RSLs (that were current at the time of the SI)
- At the Fire Training Pit (FTP) and Former Fire Station (FFS), three compounds exceeded RSLs: PFHxS, PFOA, PFOS.
- At the Inert Disposal Area (IDA), two compounds exceeded RSLs: PFOA, PFOS.
- At the Current Fire Station (CFS), no PFAS compounds exceeded RSLs, but one compound was detected: PFBA.
- SI results prompted further investigation at the FTP, FFS, and IDA in an RI. SI at the CFS is ongoing but utilizing the lab method 1633 per Army decision-making policy.

Jeff then presented an update on the PFAS field investigation conducted so far in November and December:

- Phase 1 RI fieldwork at FFS, FTP and IDA.
- Supplemental SI field work conducted at CFS.
- New Monitoring Wells (MWs) installed and sampled; Soil samples collected at all four sites.
- Field work to recommence in January 2025 (well development and GW sampling) and March 2025 (deep well installations).

Julie asked compared to other contamination like RDX is it water soluble and more. Does it migrate in similar way? Wes answered that PFAS is basically like a soap and moves readily through the water system. While it often collects at the top, it can also sink like DNAPL. One of the challenges we face is where to sample for it.

## **RESTORATION ADVISORY BOARD MINUTES**

**January 14, 2025**

Hans asked what the depths of the new wells are. Jeff replied 20 to 30 shallow wells, and a deep bedrock well to 40 to 50 feet.

Hans asked if the former fire station was being investigated for PFAS, and Jeff said that it was part of the current RI being conducted.

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

Jeff provided a brief update on the OU-3 Optimized Remedial Action project, which is for the enhanced bioremediation at the off-post RDX plume:

- Jacobs is implementing the current OU-3 RA, and we conducted eighth and final round of performance monitoring in July 2024. Jacobs finished the OU-3 RA at the off-post plume.
- Submitted the internal draft Remedial Action Optimization Report (RACR) to USACE for review in January.

Julie asked if we are done with remediation activities, and just be long-term monitoring (LTM) going forward. Jeff clarified that we are done with Optimization portion of the remedy, but that Aerostar's work will continue with LTM. The report underway marks milestone completion of the project, and it will include recommendations for any additional reinjection to treat the hotspot of the plum.

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

OU-3 Groundwater Sampling

- Up to 34 monitoring wells are sampled annually. Up to 34 monitoring wells are

## RESTORATION ADVISORY BOARD MINUTES

January 14, 2025

sampled annually

- Samples are analyzed for explosives constituents
- GW sampling will continue until royal demolition explosive (RDX) concentrations are below the health advisory level (HAL) of 2 micrograms per liter ( $\mu\text{g/L}$ )
- 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

- Aerostar reports annually on the surface water and groundwater sampling activities.
- Results are summarized and presented in the OU-3 Off-Site Annual Monitoring Report and Sampling & Analysis Plan - Fiscal Year 2024.

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 but are regularly above the health advisory level of 2  $\mu\text{g/L}$ .
- All three surface water monitoring locations (BCOFF-1, BCOFF-3, and BCOFF-6) exhibited decreasing RDX concentration trends across all data.
- The average RDX concentration at BCOFF-1 has decreased from 9.4  $\mu\text{g/L}$  to 6.8  $\mu\text{g/L}$  since Aerostar began monitoring in 2015.

She then showed a map with the latest plume depicting the groundwater sampling results from the annual event that was conducted in January 2024. Results are documented in the OU-3 Off-Site Annual Monitoring Report and Sampling Analysis Plan

Darlene then presented the OU-3 groundwater conclusions:

- The  $>2$   $\mu\text{g/L}$  RDX isoconcentration plume is approximately the same footprint/surface area as last FY
- No wells exhibit RDX concentrations between the 20 and 50  $\mu\text{g/L}$  isoconcentration this FY
- No wells exhibit an RDX concentrations exceeding 50  $\mu\text{g/L}$  isoconcentration this FY
- RDX is present within the aquifer, with the highest concentrations being along the glacial till interface
- What does EMW stand for?

## RESTORATION ADVISORY BOARD MINUTES

January 14, 2025

Darlene then presented some Mann-Kendall RDX concentration trend analysis:

- EMW-02: overall decreasing trend across all data (>99.9% confidence); no trend is exhibited for RDX concentrations since 2011
- EMW-10: no trend across all data and also exhibits no trend since 2011; however, RDX is present above 2 µg/L approximately 64% of the time
- IW-01: no trend across all data and also exhibits no trend since 2011 but is above 2 µg/L approximately 78% of the time. High fluctuations in RDX concentration prevent a statistical trend from being identified
- MW-303: overall decreasing trend (99.8% confidence). A stable trend is established for RDX concentrations since 2011
- SMW-08: no trend across all data but exhibits a decreasing trend since 2011
- SMW-11: no trend across all data and also exhibits no 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.

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There were no further questions.

### **FUSRAP Update**

Mike Kessler provided a quick update on FUSRAP activities by St. Louis District of USACE. Many of his slides are same as previous RAB meetings, and due to time limits today, he focused on the highlights and changes since the previous meeting in October 2024.

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.

FUSRAP areas of responsibility:

- Wastes are from AEC weapons manufacturing and assembly operations and from AEC test firing.
- OU-1 wastes primarily include explosive-contaminated soils.
- OU-8 waste is depleted uranium (DU).
- Current and future land use is industrial / commercial operations.

Two OUs assigned: OU-1 primarily explosives contaminated soils in Line 1 and West Burn Pads (WBP), while OU-8 is for predominantly looking for low level radiation and

## RESTORATION ADVISORY BOARD MINUTES

January 14, 2025

specifically depleted uranium (DU).

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

- REV 0 of the “Inaccessible and Continuing Sources” Data Summary Report was completed on 1 MAR 24. PM still needs to discuss results with the Project Delivery Team (PDT) to see if any further locations need sampling or can be remediated.
- Leidos had collected a second round of “bounding” samples on 10-11 SEP. The results suggested a third round of “bounding” sampling at Bldg. 1-60 which were collected on 3-DEC-24. The sample results are pending from Eurofins and will then need to be validated using FEDMS.
- REV A of the “QAPP-5” Pre-Design Investigation Report (PDIR) is now anticipated in February.

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

- No radiological remediation was required at Warehouse 3-01, or Yards C, G, and L to be protective of the site worker.
- Line 1 Structures remediation is complete.
- Southeast FSA Areas:
  - REV 0 or the PRAR/FSSE was distributed on 18-JUL-24.
- North Test Site (NTS) Area:
  - “2023” Central SUs PRAR/FSSE - Received 3 comments from EPA. Preparing responses to Regulator comments (RTRCs).
  - “2024” South-Central SUs PRAR/FSSE – REV A received from Leidos on 11-NOV. Internal USACE review ended 20-DEC. Leidos preparing responses to comments (RTCs).
- South Test Site (STS) Area:
  - Leidos wrapped up PDI and DGL sampling on 30-NOV. Data validation of the samples in progress. Delivery of REV A1 anticipated 31-JAN-25.

Other documents currently in development by FUSRAP:

- Land Use Control Implementation Plan (LUCIP) – REV A delivered on 23-DEC-24. Internal review in progress.
- Environmental Monitoring Implementation Plan for the Calendar Year (EMICY) –

## RESTORATION ADVISORY BOARD MINUTES

January 14, 2025

REV A delivered on 23-DEC-24. Internal review in progress.

- CY2024 Environmental Monitoring Data & Analysis Report (EMDAR) – Delivery of REV A anticipated 25-JAN-25.
- Yards C, G, and L plus WH 3-01 RACR – Delivery of REV A anticipated 24-FEB-25.
- Explanation of Significant Differences (ESD) (COST and LUCs) – Leidos anticipates delivery 4-5 weeks after PM provides cost data.

Hans asked if it will ever be used as a firing pad again? Mike replied that it won't.

Firing Sites 6 Area:

- Iowa SHPO wanted additional sampling which was completed on 30-APR. The Supplemental Archaeological Survey report was then approved on 16-MAY-24.
- Received REV A of the FS-6 Pre-Design Investigation Report (PDIR) on 5-APR-24. Completed internal USACE review on 6-MAY-24.

Firing Sites 12 Area:

- Need the drill rig to return to the FSA to finish the Downhole Gamma Logging (DGL) PDI sampling of the FS-12 road/embankment.

Mike shared a series of remediation maps of FS-12. Mike shared that FUSRAP work has cost \$91M since 2011 ROD. He is showing for the last time NTS remediation slide, and everything is green! Julie asked if the land would be transferred back to Army and Mike replied that process is already underway with paperwork.

Mike then discussed the Q4 2024 Activities completed

OU-1:

- Completed 3<sup>rd</sup> round of additional sampling at former Building 1-60.
- Held meeting to discuss using Transgenic Plants for remediation at Line 1.

OU-8:

- Finished PDI DGL work. Also completed all PDI GWS work around FS-15.
- Collected the autumn CY24 EMDAR samples.
- FUSRAP awarded a new construction contract to remediate at Line 1 (OU-1) and at the South Test Site (OU-8) on 17-DEC-24. The award went to Aerostar-AVESI.
- 2nd FUSRAP OU-8 Five Year Review:

## RESTORATION ADVISORY BOARD MINUTES

January 14, 2025

- Published a post-FYR news release in *The Daily Democrat* and *The Hawkeye* newspapers.

Mike then showed a new slide with STS Remediation Status, and it resembles previous maps he used to show. Not divided into survey units yet but that will happen. Yellow shows the sites that require some mechanical remediation pending. Just like he used to talk about at FS-12.

Five buildings at Line 1 that FUSRAP is currently remediating. First three are RDX contamination, and last two are SVOCs contamination. Julie asked if all these buildings are demolished, and Mike said they all demolished. These are site numbers. Is 301 gone? Warehouse 3-01 is demolished but Mike said it wasn't one with contamination.

Christa asked how the transgenic plants work for remediation. Mike is going to invite Tim Carey to come to a future meeting to give a presentation. Genetically modified switchgrass that adsorbs RDX and chemically breaks it down such that most of the components are treated as fertilizer and by-products going into cells for creation of the plant. It eliminates RDX as opposed to just transferring it (like some uptake remedial actions where chemicals are moved into the leaves for example).

There was a white paper with articles that shared test results that was brought to Mike's attention about this remedy. Not USDA approved. Needs to be kept mowed and can't go to seed, since it's experimental at this point.

Jen asked how long does it take? Is it years? Is it a season? Mike said we'll have to see during the study.

Hans asked how large of an area? Mike has some inaccessible areas that vary from 15 by 30 ft west of building 1-12 with steam lines in the way as one spot. Another place has support for steam pipe where Mike's team has remediated around it, but he's hoping that switch grass might work there. At line 1 he's looking at maybe 1/8 acre. Tim's grant allows for about 1000 plants with plugs.

Mike then presented his Q1 2025 Activities Planned, including for the remediation contract (AARC):

- Submit pre-construction documents.
- Submit draft OU-1 and OU-8 CONOPS plans.
- Conduct Value Engineering workshop.
- Submit excavation plan for Bldg. 1-05-1.

OU-1:

- Using the OU-1 Line 1 "Inaccessible and Continuing Sources" DSR, hold PDT



## RESTORATION ADVISORY BOARD MINUTES

January 14, 2025

meeting to evaluate path forward and then discuss with IAAAP.

- Complete the permit to use the Transgenic Plants for remediation at Line 1.

OU-8:

- Distribute REV 1 of the “2023” OU-8 FS-12 Central SUs PRAR/FSSE.
- Wrap up internal review of the “2024” OU-8 FS-12 South-Central SUs PRAR/FSSE. Deliver REV B for regulator review.
- Complete an internal USACE review of the OU-8 LUCIP, EMICY, CY24 EMDAR, Yards C, G, and L RACR, STS PDIR, and the OU-8 ESD.

Mike presented a slide of six metrics and milestones from USACE headquarters with a color coding for whether it was going to be met. For 2025 these were listed as:

- Award Line 1 and STS remedial action contract (green)
- Award HTRW/FUSRAP support contract
- Excavate & Process >RG soil from STS (14,300 CYs)
- Excavate >RG soil from Line 1 (1,000 CYs)
- 1 property at Remedy in Place (RIP) (Line 1)
- Complete the OU-8 ESD

There were no further questions.

### **OU-1 Remedial Design**

Seth Reedy of USACE Omaha showed a map of Line 3 Soil Sampling as part of his action item from October RAB meeting to answer a question from Julie about melt building 3-05-2. 15 soil borings at that location. Went about 4 feet deep around and hit bedrock. All clean fill above bedrock. No sampling conducted.

Just inside footprint. The outside had already been remediated previously in the 90s, and same went for building 3-99-5 and building 3-05-1 was similar. Nothing but good news so far at this site.

However, back in 1942 there was an explosion in this area at building 3-05-1. Seth is curious to see if we do find RDX in future sampling out there.

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

There were actions from last meeting:

- Jen reported about Building 4A and she has a one page list of Phase 11 demolition from Randy that she can share. Contract for demo ends in September of this year. At 4A they are taking some walls, sumps and ramps down.
- Seth gave an update on Line 3 sampling and old melt (see above).

### **Action Items For Today**

- Firing Site future use

Iowa Army Ammunition Plant  
**RESTORATION ADVISORY BOARD MINUTES**  
**January 14, 2025**

- Switch grass with Tim Carey as guest.
- EPA wants to bring more visitors and conduct a site tour. Jen said she could get a bus in April.

Hans announced that the next meeting is planned for 15 April 25. Meeting adjourned at 09:59 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/OU-3 Remedial Action Update
  - 4 OU-3 SW/GW Monitoring Update
  - 5 FUSRAP Update
  - 6 OU-1 Remedial Design

Exhibit 1

**GOVERNMENT MEMBERS PRESENT (4)**

Jen Busard  
LTC John Dunlapp  
Shelly Nellesen (via teams)  
Wes March

**RAB MEMBERS PRESENT (4)**

Hans Trousil  
Julie Solinski

**RESTORATION ADVISORY BOARD MINUTES**

**January 14, 2025**

Dean Vickstrom

Christa Poggemiller

**PUBLIC PRESENT (18)**

Jeff Morrison

Mike Kessler

Seth Reedy

Jonathan Harrington

Darlene Abbott

Dean Johnson

Jeff Gill

Libby Miller

Jody Barker

Jeffrey Moses

Zach Hill

Greg Rakers

Curtis Crawford

Kane Sherman

Amanda Smith

Chris Evans

Kim-Lee Yarberry (via Teams)

Mindy Johnson (via Teams)

Total in attendance: 26