



Hanford Advisory Board

FINAL MEETING SUMMARY

**HANFORD ADVISORY BOARD
RIVER AND PLATEAU COMMITTEE**

*February 14, 2017
Richland, WA*

Topics in this Meeting Summary

Opening..... 2

New Facilitation Team..... 2

Plutonium Finishing Plant Update..... 2-3

K Basin Sludge Update 3-4

200-WA-1 and 200-BC-1 Remedial Investigation/Feasibility Study Work Plan4-7

Committee Business..... 8

Attachments 8

Attendees.....8-9

This is only a summary of issues and actions discussed at this meeting. It may not represent the fullness of represented ideas or opinions, and it should not be used as a substitute for actual public involvement or public comment on any particular topic unless specifically identified as such.

Opening

Jan Catrell, River and Plateau (RAP) committee chair, welcomed the committee and introductions were made. There were no changes to January meeting minutes.

New Facilitation Team

ProSidian Consulting introduced their credentials as a team with approximately 30 years of experience in Energy and Sustainability. Lindsay Strasser is our point of focus for the ProSidian Team. She has roots in the community with her husband being a math teacher in the community. She has extensive experience with Hanford working through PNNL and HPM Corporation who is a Prime Contractor on Site. Lindsay is housed in our Richland office located at 713 Jadwin, Suite 3, Richland, Washington 99352. She can be reached directly at 509-588-7010.

Our Lead Facilitator, Freddie Barrett, has over 15 years of Executive Coaching and Facilitation experiences. She has worked with agencies such as Environmental Protection Agency (EPA) and the King County Local Hazardous Waste Management Program (LHWMP) in various capacities.

Plutonium Finishing Plant Update

Pam Larsen, HAB Issue Manager provided an introduction to the Plutonium Finishing Plant topic and Tom Teynor. Tom Teynor, Federal Project Director provided an update on the ongoing progress of the Plutonium Finishing Plant. He communicated that this is one of the most challenging buildings to cleanup. The inside is cleaned out and they are currently dealing with the demolition of the structure. Tom shared a Powerpoint presentation which provided further detail into the Plutonium Finishing Plant update. He communicated the desire to accelerate work on 242-Z so it can be the first facility completed. The first facility is planned to be completed in February. This estimate is dependent on the final debris load.

The Americium Recovery Facility (242-Z) contains the McCluskey Room. He discussed the contamination release stating it was Alpha and Radon that turned up on two hoods. All other personal protective equipment was clean. They have some theories about how this event happened but he's still investigating and not prepared to discuss theories. The workers were well trained and prepared for this event, which minimized the impact. Events are a normal part of conducting this kind of project and the workers followed their procedures to everyone's benefit. Tom stated they are reducing the size of the loads to better look for contamination and origin of this event. They are also applying lessons learned, changed the filter paper and added fixative before they move loads to prevent further exposures. With these added changes, there have been no further alarms. There has also been post sampling boundaries setup. Everything outside the boundaries surveyed was clean.

Work is continuing for pre demo of 234-5Z. The 40th air filter is to come off and the remainder should be finished by April, 2017. The asbestos removal is continuing along. Over time, the asbestos on the pipes adhered to the walls adding 9000 linear feet of additional asbestos to be removed. Additional teams have been added to encase the asbestos in plastic for removal.

With the recent weather the Tri-Cities has had, there was discussion around the ability to continue work in the cold temperatures. Work is only being done when the temperature allows for the use of the water suppressive spray. With that being communicated, Tom mentioned the exposure and weather delays have caused a total of 23 work days lost and suggested a two-month interval before he returned to HAB with another update. Even with the work days lost, the crew is on schedule to safely move forward with the work.

Remaining Recovery Actions:

- Work package revision
 - Suppression during debris location
 - Special handling and packaging requirements for debris pile
- Survey and relocation of unrelated waste containers caught up in event
- Installation of three additional fixed head samplers and one additional CAM
- Process and load debris pile

Key Communication:

- What you read in the paper is accurate in regard to recovery. There was no skin contamination. 2 individuals had slight contamination on the top of their hood. Personal protective equipment was clean.
- Monitoring is being done in real time. The monitoring system worked appropriately and work stopped so the team was able to move forward and recover the situation.
- The workforce is resilient and are safely continuing work.
- The HAB expressed their gratitude and compliments to all who handled a dangerous event well. Ecology complimented DOE/PFP on how well the abnormal event was communicated.

K Basin Sludge Update

Pam Larsen and Dale Engstrom, HAB Issue Managers provided an introduction to the K Basin Sludge update. They introduced Mark French, DOE-RL to lead this topic. Mark played a detailed video on the sludge removal process for the board. It showed the difficulty of removing items by working around the grates using extension tools. Workers also use cameras and monitors to see what they are doing, adding another level of difficulty to the work. To avoid ergonomic problems, workers take breaks every two to four hours.

A lot of work has gone into the development and testing of the process for sludge removal. Because of this, there is a high level of confidence that when the process begins, the sludge will transfer. When work begins, T Plant is operational and prepared to receive the sludge. Prior to the beginning of the process, contractors will need to conduct a ground readiness review.

- Q: Prime contracts are going out for RFI. How will we move forward with completing when contracts are up for rebid and turnover?
- A: The goal is for completion before contractor turnover. Typically workers remain in place, and there is a management chain. We can work around procedure changes.
- Q: What is the ultimate disposition of this waste beyond T plant?
- A: Milestone now is to complete process of the sludge is 2030.
- Q: Has there been any thought into future retrieval technology?
- A: Sampling testing is currently being done at PNNL.
- Q: What is the lifespan for the overpass?

- A: 30 Years. The sludge transport and storage containers (10 feet tall, 6 feet in diameter, stainless steel) are put on semitrailers of brick for transport.
- AGENCY OPPORTUNITY TO COMMENT
 - **EPA, Rod Lobos**
 - K Basin sludge has been extended a few times. It's really good to hear we are ahead of schedule. To give DOE credit, they have been working very hard to ensure the process in place has a high probability of working.
 - Milestone 1016173 (treatment technology for additional milestones for how sludge is treated) should be kept on the radar, 2022 (Add to workshop).
 - **Ecology:**
 - No Comment

WA-1 Remedial Investigation/Feasibility Study Work Plan Update

Shelly Cimon provided an introduction to the WA-1 RI/FS Work Plan and to John Sands of DOE-RL. John Sands provided a broad overview and PowerPoint presentation noting the large variations in these areas. There are several sites and not all of the sites are equal. By operable unit, 200-WA-1 OU has 163 sites and 200-BC-1 OU has 27 sites. Some are easy and affordable and others will be complex and costly. Due to this, we are moving from a process based to a geographic based approach.

- By Geographic Area:
 - U Plant: 61 Sites
 - S Plant: 36 Sites
 - Z Plant: 17 Sites
 - T Plant: 49 Sites
 - BC Cribs & Trenches: 27 Sites

The preparation of this work plan has already begun. Another way to group is by depth. A lot of sites will require holes to see how far down the contamination goes. We are under the assumption it does not go to groundwater. There are natural barriers in the ground that hold up contamination. Based on volume, we don't expect contamination to hit groundwater.

In addition, a review was done to ensure all waste sites were housed properly. In the future when PFP is complete, those waste sites will come over to WA-1. It was also communicated that source and groundwater used in the 200 area are separated.

Data that requires evaluation:

Each waste site was evaluated independently to:

- Determine whether sufficient data exists to understand contaminant nature and extent.
- Evaluate Human Health and Environmental (HHE) risks and threat to groundwater.

- Develop appropriate preliminary remedial alternatives.

The evaluation resulted in, and the work plan presents:

- 11 waste sites that were adequately characterized.
- 28 sites that were similar and could rely on a data collected from a comparable site.
- 151 waste sites required characterization.

Discussion resulted in the desire and need for the following:

- Risk assessment estimation
- Conceptual site models for both human health and environment
- The need to model each contaminant to not further contaminate
- The need to understand the site to know what alternatives there are
- The need to follow up with John Sands to request an example of the conceptual site models

Shallow Waste Site Investigations:

Contamination at shallow waste sites is expected to extend from surface to a depth of 15 feet. The team is currently using the characterization approach.

Well Defined Sites:

- Site reconnaissance
- Surface field screening
- Surface soil sampling (0-1 ft.)
- Subsurface soil sampling (2-15 ft.)
- The number of samples will be adjusted depending on the size, configuration and heterogeneity of the site.

Poorly Defined Sites:

- Area-wide grid or composite sampling may be conducted, pending results conduct more focused sampling
- Confirmation soil samples will still be collected to confirm contamination does not exist

Intermediate & Deep Waste Site Investigations:

Contamination is expected to be greater than 15 feet. The team is also using the characterization approach for these investigations.

- Sites will be assessed through boreholes and soil samples
- Boreholes will be installed within the waste site footprint in the area of highest known or expected contamination

- Samples will be collected at soil depths of interest, such as, geologic contacts, where grain size increases or decreases and silt and clay layers

Non-Soil Waste Sites:

- There are 30 “non-soil” waste sites, including concrete slabs, foundations, vaults, tanks, basins, and sand filters.
- Samples for these structures will be collected using several approaches
- **For Concrete Slabs, Foundation, and Vaults:**
 - Characterization scoping survey to provide an overall assessment of contamination
 - Radiation surveys of accessible surface of the structure
 - Collect surface samples, if warranted
 - Where necessary, core-drill concrete and sample
 - If additional characterization is required, create a specific sampling plan
- **For Retention Basins:**
 - Sample concrete and vadose zone below
- **For Tanks:**
 - Radiological screening, geophysical logging and vadose sampling

200-WA-1 RI/FS Work Plan

- The work plan describes the activities for conducting and developing the RI/FS for the 200-WA-1 and 200-BC-1 OUs.
- The 200-WA-1 and 200-BC-1 RI/FS Work Plan Rev. 0 was approved by EPA on January 31, 2017.
- The work plan presents the data evaluation process, how risk will be assessed, and the approach to remedial alternative development.
- Appendix D of this work plan provides a detailed summary of each waste site, including site history, construction information, discharge volume, and nature and extent of contamination.
- Appendix E of this work plan is a Sampling and Analysis Plan (SAP) detailing the process of fulfilling the additional data needs. It also provides site-specific Field Sampling Plans (FSPs) for each site where additional characterization is proposed to address data needs.

John Sands provided a project schedule to the board for review for the 200-WA-1 and the 200-BC-1 OUs stretching out to FY23. Project schedule notes:

- Characterization Field Work activities include: Cultural Reviews, Radiological Hazards Screening, Prepare and Issue SAPs. Waste Site Remedial Investigation, and prepare/Issue Focused Investigation Reports.
- Schedules were developed using the review and approval durations established in the TPA, if

these durations are exceeded the schedule will experience a day for day slip.

- Schedule performance is subject to availability of funding.

John communicated the waste sites are a very congested area. As noted, the project schedule is broken down by location. They are first working on the approach. Part of the approach is to do the characterization.

Craig Cameron (EPA) indicated that the dust is settling with PFP demolition and once the removal actions are completed they will figure out what new sites should be added to the work plan and SAP

- Q: How does the single cell tanks EIS modeling compare to the cumulative impacts modeling?
- A: The Tank Farm EIS model has a lot of assumptions that are not appropriate. No remediation. We have been using a certain type of model through our circle of history. We want to continue with that modeling approach. EIS Modeling is different, for a different approach.
- Q: Does Ecology have a vested risk?
- A: EPA is the lead, Ecology is the support agency.
- Q: 200-WA-1 doesn't sound like a graded approach?
- A: We are making risk based decisions.
- OPEN DISCUSSION
 - We need to get into these sites. We know there are data gaps. This will be a multi-year process. In the meantime, we will continue to gather knowledge in the field. All of that information will be included in a feasibility study report. That information goes out with a proposed plan to the public. Will get feedback and figure out what makes the most sense moving forward.
 - John Sands said that looking ahead, it may not be feasible to get the 200 area groundwater to meet drinking water standards. This will need to be a risk management decision. Craig Cameron reiterated that EPA believes doing an alternative point of compliance for groundwater is a waste of time and effort. He clarified, when asked about the standard point of compliance, that it is at the boundary of each waste site.
 - Craig indicated that EPA focuses on information on the waste sites and moving forward with the CERCLA cleanup. In some ways, DOE has asked for more surface samples than they would if they followed the observational approach during excavation. The cumulative analysis part of it does not have as much to do with this RI/FS plan.
 - Can there be sensitivity analysis built in as part of the cumulative risk assessment? Both EPA and DOE indicated the value of sensitivity analyses.

Upcoming Milestones:

- To complete the RI for 200-WA-1 & 200-BC-1 by 12/31/2021.
- DOE to deliver draft RI/FS report & draft proposed plan for 200-WA-1 and 200-BC-1 OUs to EPA by 07/31/2023.

Follow Up:

- Issue Managers need a call to discuss this topic further
- Committee needs more time to discuss this topic

Committee Business:

- Committee needs phone call to discuss 3-Month Work Plan

Attachments

Attachment 1: HAB River and Plateau Subcommittee Plutonium Finishing Plant Update (2/14/17)

Attachment 2: YouTube link for K Basin Sludge: <https://www.youtube.com/watch?v=8h-Wdn5ql1k>

Attachment 3: 200-WA-1 and BC-1 Operable Units RI/FS Work Plan Overview (2/14/17)

Attachment 4: Figure 6-1. Project Schedule for the 200-WA-1 and 200-BC-1 OUs

Attendees

Board Members and Alternates:

Jan Catrell	Susan Leckband	Steve Hudson
Dale Engstrom	Bob Suyama	Shelley Cimon
Alex Nazarali	Gene Van Liew	Dawn Wellman
Vince Panesko	Casey Mitchell	Rebecca Holland
Dirk Dunning	Don Bouchey	

Others:

Jennifer Colborn - MSA	Shintaro Ito -PNNL	Yashuhiro Nakai – METI, Japan
Dana Cowley-Gribble - MSA	Annette Cary – Tri-City Herald	Rich Buel - DOE
Tom Rogers – WA DOH	Ginger Wireman- Ecology	Patrick Baynes – CHPRC
Emy Laija – EPA	Rod Lobos - EPA	Mark Heeta – DOE-RL
Stephanie Schleif - Ecology	Tom Teynor – DOE-RL	Mark French – DOE-RL
Ray Gelmber - CHPRC	John Sands – DOE-RL	Mark Heeta – DOE-RL
Joe Axtell- DOE-RL		

By Phone:

Adrian Woolcock- ProSidian	Ken Niles – State of Oregon	Ben Durosola- ProSidian
Dan Leone- Reporter, Exchange Monitor at Access Intelligence	Emmett Jackson – Hanford Workers	