



**FINAL MEETING SUMMARY**

**HANFORD ADVISORY BOARD**

*June 12 & 13, 2019*

*Richland, WA*

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*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.*

## **Executive Summary**

### **Hanford Advisory Board (Board or HAB) Action**

There was one letter adopted at the June Board meeting.

### **Hanford Advisory Board Business**

The Board will hold two committee calls in July. The Board discussed the following:

- Draft Letter: DOE's Enhanced Waste Glass Program
- EM SSAB Chairs Recommendations
  - EM's Review of Cleanup Milestones
  - Improving EM's Science and Technology Program
- HAB's 25<sup>th</sup> Anniversary Celebration
- Potential Committee of the Whole Topics

### **Presentations & Updates**

The Hanford Advisory Board received the following presentations and updates:

- Tri-Party Agreement (TPA) Agency Updates
- Parametric Evaluations of the High-Level Waste and Pretreatment Facility
- HAB Committee Reports

### **Public Comment**

There were three public comments received at the June meeting.

Susan Leckband, League of Women Voters and Board Chair called the meeting to order. The meeting was open to members of the public and offered opportunities for public comment.

The Board meeting was audio-recorded.

### **Welcome & Announcements**

JoLynn Garcia, HAB Coordinator for U.S. Department of Energy (DOE) Office of River Protection (ORP) and Richland Operations (RL), noted that the meeting was in accordance with the Federal Advisory Committee Act (FACA).

Lindsay Strasser, HAB facilitator provided members with informational announcements.

In addition, Lindsay reminded members of the HAB's operating ground rules which were posted both in the back of the room as well as at each seat.

Tom Carpenter, Hanford Challenge introduced Jeanna Deforeit to fellow Board members. Jeanna will be taking over for Liz Mattson as Deputy Director for Hanford Challenge when Liz relocates in August.

Susan Leckband confirmed the adoption of the [April Board meeting summary](#).

### **Tri-Party Agreement Agency Updates**

#### *U.S. Department of Energy*

Brian Vance, Site Manager for DOE-ORP and Acting Site Manager for DOE-RL provided Board members with a presentation highlighting recent Hanford Site activities. Brian noted the following key points in his presentation<sup>1</sup>:

- There are a lot of reasons to be optimistic of the state of the projects across the Hanford Site. There is meaningful progress being completed every day. Progress continues to support reduction of risk to the Hanford Site and consideration to the safety of the workforce, public and the environment. In addition, progress supports the transition to Direct-Feed Low-Activity Waste (DFLAW) operations in 2022.
- Although DOE & RL remain separate offices, Brian has the opportunity to work across the entire leadership team. The leadership team meets at a minimum, three times per week and often many more times than that to look at the Hanford Site holistically. The leadership team is ensuring they are looking at the Site in a coordinated and collaborative way.
- DOE continues to focus on four main themes:
  - Transition to Waste Treatment Plant (WTP) Operations
  - Continue to be a demanding and fair customer

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<sup>1</sup> [Hanford Advisory Board - DOE Agency Update](#)

- Continue to mature relationships with stakeholders
- Transition to DFLAW Operations
- There has been an Environmental Management (EM) leadership change. The leadership change does not change the course for work being done at the Hanford Site. It does not change the contracting approach or Site priorities. The Hanford Site will see continuous progress of the projects as they currently stand.
- Change creates the opportunity for positive adjustments. DOE has the opportunity to shape the trajectory of the Hanford Site over the next 10 years.
- With the national-level change to the interpretation of High-Level Waste (HLW), there will be no changes to current plans or processes at the Hanford Site. DOE remains fully committed to have conversations with the Washington State Department of Ecology (Ecology) at the time that it makes sense and prior to implementation. It is clear that South Carolina will be the first point of application.
- DOE remains committed to the Test-Bed Initiative (TBI). The fabrication work will continue. DOE believes TBI is part of the overall portfolio that is needed to execute the cleanup mission at the Hanford Site. DOE fully expects to get back to TBI in fiscal year (FY) 2020.
- The President's budget process continues. The Hanford Site has had very good visits over the last six or seven weeks from Senator Cantwell, Congressman Newhouse, Senator Murray's new legislative director, and members of the armed services committee. It is clear that the delegation and committees are visiting the Site to understand where the Site stands and the progress that is being made.
- Outreach activities continue at the Hanford Site. A townhall style meeting was recently held to provide the workforce the opportunity to ask questions from the leadership team. The entire leadership team was in attendance to answer questions. The Hanford Regional Dialogue (HRD) is scheduled for the evening of June 12, 2019. A constructive dialogue is expected.
- Public engagement remains an important part of the mission at Hanford. DOE is working to speak with a broad range of people across the region to communicate the mission of the Hanford Site and why it's being done.
- DOE is mindful of the approaching workforce of the future challenges at the Hanford Site. Brian met with company presidents, university presidents and labor union leaders in January to discuss the challenges in recruiting and retaining the talent needed at the Hanford Site. DOE will continue to work with contractors, universities and labor unions to ensure people have a true and accurate representation of the work completed at the Site to progress the mission.

*U.S. Department of Energy – Office of River Protection*

Ben Harp, Deputy Manager for DOE-ORP, provided Board members with a presentation highlighting recent ORP activities. Ben noted the following key points in his presentation:

- DFLAW is the top priority for DOE-ORP. To ensure DFLAW operates as designed, entire Site integration is required.
- Since the April HAB meeting, progress has been made at WTP. Progress has been made closing legacy quality issues that have been on the project for several years. An integrated team consisting of ORP and Bechtel National Inc. (BNI) has worked to closeout issues allowing for no questions in the quality of the facility.
- DOE-ORP has completed turnover of 152 out of 257 DFLAW systems. Outlined as a major accomplishment, over half of the systems have been turned over to the startup of the system.
- Design has been completed for the storage pad of the ion-exchange columns that will be used as part of the Tank-Side Cesium Removal System (TSCR).
- The Resource Conservation and Recovery Act (RCRA) permit was submitted in May of 2019 for DFLAW.
- New exhausters are being installed in SY Farm to support the upgrade throughout the Farms. Ventilation systems are being replaced in AP and AW Farms to support retrieval.
- DOE-ORP continues to install barriers to prevent rainwater from driving contaminants to groundwater. Installation is noted as a major project for Washington River Protection Solutions (WRPS).
- Several pieces of equipment are being removed from C Farm. Equipment removal supports eventual closure of C Farm.
- Significant progress is being made to prepare for AX retrieval. Retrieval is scheduled for late summer of 2019.

*U.S. Department of Energy – Richland Operations Office*

Joe Franco, Deputy Manager for DOE-RL provided Board members with a presentation highlighting recent DOE-RL activities. Joe noted the following key points in his presentation:

- The infrastructure on the Hanford Site was laid out between the 1940's and the 1960's. DOE-RL is evaluating the current and future infrastructure needs of the Hanford Site. Reconstructing and rejuvenating the Site infrastructure will allow for upgrades needed for DFLAW.
- The Site receives over 10 million emails per month within the Site infrastructure. Over 60,000 phone calls are made each day on the Hanford Site. DOE-RL is looking at all of the information technology systems to stay ahead of the game to provide the services that are needed on Site.
- Work is continuing along on the Central Plateau and in the River Corridor. An evaluation was completed and some of the infrastructure systems have been shut down. Some powerlines along the River Corridor have been de-energized and removed. DOE-RL is looking at removing power poles that have been left behind as well.

- The Plutonium Uranium Extraction Plant (PUREX) Tunnel 1 was filled completely with grout. An analysis was completed on PUREX Tunnel 2 which identified it being at a critical stage. In coordination with the regulators, DOE moved forward with the grouting of Tunnel 2. Tunnel 2 was filled with roughly 42,000 cubic yards or 4,200 trucks of grout. The stabilization part of the project is complete.
- The sludge removal project continues to be successful. DOE-RL credits the mockup facility to the success of the project. The full-scale mockup has provided a good insight to workers. Workers were able to practice without the constraints of the contamination. Sludge is being moved from the K Area to T Plant for disposition and later disposal. As the sludge is transuranic (TRU) waste, DOE-RL is looking at the potential of shipment to the Waste Isolation Pilot Plant (WIPP).
- 65-70% of sludge has been transported. DOE-RL has currently completed 14 sludge transport and storage containers. The 15<sup>th</sup> container is full at K Basin and is ready for shipment. Completion is planned for the end of FY19.
- Steady progress is being made at the Plutonium Finishing Plant (PFP). Low-risk demolition is a coordinated effort between DOE, Ecology and the Environmental Protection Agency (EPA). Work plans have been revised for the recovery of the facility. Demolition of 5Z (the main facility) has begun.
- A management assessment was completed for the higher-risk work at PFP. Before the higher-risk work can take place, DOE will need to work with Ecology and EPA to lift the stop work. Low-risk work is expected to be completed at the end of July. After the low-risk work is complete, DOE-RL will look at resuming the high-risk work. Work is expected to be completed at PFP by the end of the 2019 calendar year.
- Contamination was found under the B Cell at the 324 Building several years ago. A lot of planning has been done to ensure the soil can be removed in a safe, compliant and efficient way to maintain the safety of workers and the community.
- A mockup facility was built in support of the work at the 324 Building. The mockup is serving as a test phase for DOE-RL. Workers are currently training and testing equipment at the full-scale mockup.

*Washington State Department of Ecology (Ecology)*

Alex Smith, Washington State Department of Ecology (Ecology) Program Manager, provided Board members with an update on recent Ecology activities. Alex noted the following key points in her presentation<sup>2</sup>:

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<sup>2</sup> [Department of Ecology Agency Update](#)

- On May 29, 2019 Maia Bellon sent a letter to Anne White expressing concern with potential changes to the tank waste mission. DOE is being challenged to complete the pretreatment facility on time and within a reasonable budget. DOE is in the process of analyzing alternatives to provide the same functionality using different facilities and structures. Ecology has concerns regarding what this means for the overall mission at the Hanford Site. Ecology remains committed to working with DOE collaboratively as they address broader concerns.
- The State is currently evaluating options regarding the high-level waste (HLW) federal register notice. Ecology's thoughts can be found on their comment letter that was submitted in the October 10 proposal.
- Ecology's team worked collaboratively and efficiently with the team from DOE to get the research and development permit ready for the Test Bed Initiative. DOE has withdrawn the permit application but has communicated they may re-initiate the permit application within a year. Ecology stands ready to get that permit issued on an expedited timeframe.
- System Plan negotiations are ongoing. There are no tentative agreements on Tri-Party Agreement (TPA) milestones. When milestones have been negotiated, there will be a public comment period that will follow the agreement.
- Ecology continues to work diligently to keep permitting going. In 2019, there have been 60 completed, in process and planned permit modifications.
- Several permit modifications forecasted as of June 2019 are directly correlated with DFLAW.
- Ecology is working on the permit renewal for Perma-Fix. Ecology is forging ahead on the State Environmental Policy Act (SEPA) process which will include an evaluation of waste that is associated with TBI.
- Steady progress is being made on Rev. 9 of the Site-wide permit. Ecology is working collectively to a schedule of getting it out for public comment in 2022.

*U.S. Environmental Protection Agency*

Dave Einan, EPA Region 10 Manager updated HAB members on recent EPA activities. Key points covered in Dave's update include:

- EPA appreciates everything the Board brings to Hanford cleanup.
- EPA will be hiring a senior regional public liaison (RPL). In addition, Dave will be able to hire a more junior position. The announcement for the junior level position should be out shortly. Postings can be found on <https://www.usajobs.gov/>.
- EPA will be bringing all of their local staff to the Hanford Regional Dialogue.

***Board Member Questions (Q), Responses (R), and Comments (C):***

Note: This section reflects individual questions, comments, and Agency responses

*Q: "I am curious and interested in understanding what we will need at the Site in terms of skillsets when we transition to startup. How do you envision those changes? I think we would appreciate some conversation on that as we move forward. We tend to not get into the contractual agreements. The success of dire really will be dependent on the skillset of the workforce and the ability to meet the needs. It's hard programmatically for EM to find the skills and people who are needed."*

R: "The good news is that we are probably 60-70% hired for the commissioning techs. Bechtel has been aggressively hiring. It is a pretty broad demographic which is really good. They go through a pretty exhaustive training course and really have to understand the physics of the machine. As they transition into the startup world, they will start to get more hands-on time. It is very similar to how the Navy trains nuclear operators and the process I went through. I think approach is sound. Bechtel has not had any problem when they have gone out to recruit. They shoot for classes of 25-30 and have had over 100 applicants per class. That part of it I think we are on a good track to build the team to transition from startup and commissioning to operations. In the longer term, we need to de-mystify what Hanford is and what it is all about. We need to talk about what a great opportunity it is to live in the Tri-Cities. I think that will resonate with a lot of people who have young families. I think we really have to create the opportunity to have people want to work and Hanford. They will see it as a valuable career and see it as a life-long opportunity."

*Q: "You talked about the K West Basin and the expectation that by the end of this fiscal year, all of the sludge will be removed. What is the plan for the K West Basin?"*

R: "It's not just the sludge that's going on right now. We also have some of the remedial actions going on for some of the waste sites that are still around the area. The plan right now is that once the sludge is out from the K West Basin, to clean the debris that is still in the Basin. We will then do the same as we did with the K East Basin. We will fill it with engineered grout and demolish that Basin. We will dispose of it at ERDF. We will then get the reactors ready to put into interim storage once we complete the remediation of the waste sites around the K Area."

*Q: "I didn't hear you talk about the Z-9 Crib. We all know that has plutonium in it and is a very high risk. I didn't see anything. I am curious if there is some activity that will happen with it in this coming year?"*

R: "It is kind of tied into a bigger picture. We have had an evaluation of other items that we have a risk as an evaluation done after PUREX Tunnel 1 collapsed. Z-9 is one of the higher-risk sites."

R: "What we have ongoing right now is a structural analysis of the subsurface structures that will be equivalent to the Tunnels at the Site. We are evaluating those. CHPRC has brought in an engineering firm where they will be doing an engineering evaluation where they are actually looking at the design criteria and specifications. They will establish where we think that criteria is right now as they inspect it. From that, we will rank which structures rise to the top and which require action. We are in the process of that and expect that to be finalized in the next several weeks. From there, we will take action."

R: “We do plan to share that information with the HAB as we move that process forward.”

*Q: “Alex on your slide showing the permit modifications, does this not include the air permitting effort? You also show 26 BPEs?”*

R: “It is building emergency plans. It is the way of making sure all of the security requirements are taken care of by using that department’s existing plans.”

*Q: “I have a question regarding the TBI permit. Once an application is received by Ecology, how long will the permit approval take for that activity?”*

R: “We were working on a schedule to get it done within six months. I think we actually tried to accelerate that. That was the schedule to get it through the public comment period and response to comments within six months.”

*Q: “Has there been any progress been made on the system to capture and treat vapors that is being considered? Are you satisfied with how that progress is going?”*

R: “As part of the vapors settlement, there was some technologies that were being pursued. Right now, we are testing those technologies. I don’t know the exact date for completing those tests but we are still pursuing those under the settlement agreement.”

R: “The new system has been under testing but I don’t remember the key date in the settlement agreement. We are chugging along with progress toward that. There are various phases we tested. We tested at their facility, we tested here. That was really a thermal destruction system. Initially it was propane powered and then we went to a diesel. That also added some complexity to the testing. I think that’s ongoing. I haven’t heard anything recent on that.”

### **Public Comment**

There were three public comments received at the June Board meeting.

### **Draft Letter: DOE’s Enhanced Waste Glass Program**

Bob Suyama, Chair of the Tank Waste Committee (TWC) introduced the topic of the Draft Letter on DOE’s Enhanced Waste Glass Program<sup>3</sup>. Bob communicated that the initial conversation began on March 13, 2019 with a presentation on “as good as glass” with Albert Kruger. Bob shared that the draft letter began as advice in the TWC and transformed into a letter. There were lots of comments regarding the loss of expertise and key skills. The committee decided this was an issue large enough to address in future advice. The draft letter assists as a conversation starter with DOE on the loss of skills and expertise.

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<sup>3</sup> [Draft letter: DOE's Enhanced Waste Glass Program](#)

Jeff Burright, Lead Issue Manager shared with the Board that there are three main components to the draft letter. The first is the committee wanted to accentuate the positive. They wanted to share their support for the investment that DOE has made in glass science over the years. The second theme the group wanted to emphasize in the letter was the advancements that Albert Kruger discussed as well as potential additional savings on the horizon. The third theme was to focus on succession planning. You need to have those who are up to speed to fully integrate into the process to ensure lessons are being learned. With Albert Kruger eligible for retirement, the group felt it was prudent to note that it would be wise to begin training his replacement as soon as possible.

Susan Leckband, Chair of the HAB confirmed with members there were no conceptual issues with the draft letter on DOE's Enhanced Waste Glass Program. Board members shared no conceptual concerns.

Following the incorporation of agreed upon revisions and minor wording changes, the Board approved the letter of appreciation. The final letter will be sent to Brian Vance and will copy Albert Kruger and Ben Harp.

### **EM SSAB Chair's Recommendations**

Susan Leckband introduced the EM SSAB Chair's Recommendations. Susan shared there are two EM Chair's recommendations for discussion. Those recommendations include:

- EM Chair's Recommendation: EM's Review of Cleanup Milestones<sup>4</sup>
- EM Chair's Recommendation: Improving EM's Science and Technology Program<sup>5</sup>

Susan shared that there is some concern regarding the nomenclature of cleanup milestones. Across the EM complex, milestones are different. The Government Accountability Office (GAO) expressed the need for a complex-wide and consistently-applied data dictionary. The GAO would like cleanup to mean the same thing at all of the Sites. This will allow people looking at cleanup across the EM complex to be able to apply the same terminology. The intent of the first recommendation was to use the same data dictionary across the EM complex. The second intent was to enable the local EM Boards to be able to access Site-specific milestone information in a timely manner.

Shelley Cimon, Columbia Riverkeeper and Board Vice-Chair introduced the second EM recommendation. Shelley shared that the other interest DOE Headquarters (HQ) had was looking at improvements to the EM Science and Technology program. Shelley stated that there is a feeling that there is a need for some type of database that is open, accessible and transparent that is available to scientists, regulators and the public. It was determined that it would be helpful to have access to a database that helps understand best practices and decisions. The number of best practices and decisions was reduced

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<sup>4</sup> [EM SSAB Chair's Recommendation: EM's Review of Cleanup Milestones](#)

<sup>5</sup> [EM SSAB Chair's Recommendation: Improving EM's Science and Technology Program](#)

from the original proposal as the EM Chairs could not come to agreement. The four the EM Chairs agreed upon that address programmatic concerns are included in the second recommendation.

***Board Member Questions (Q), Responses (R), and Comments (C):***

*Note: This section reflects individual questions, comments, and Agency responses.*

*Q: “I think this is great. Do milestones mean different things in different places?”*

R: “Yes they do.”

*Q: “So we are asking EM to create a consistent definition. Do we trust them?”*

R: “We always ask.”

C: “I am not questioning the letter. I am questioning why other sites are in favor of it. Overall, the data dictionary will be flooded with Hanford stuff that might be unique. I am not sure it is in their best interest to do that. I am expressing that concern. It may not be in the best interest of the other Sites due to the complexity of the milestones at Hanford.”

*Q: “Is the “who we are” section going to appear as a footnote?”*

R: “Yes it will.”

By consensus with a thumbs up/down vote, the Board approved Susan Leckband to sign both the proposed EM recommendations.

**U.S. Army Corps of Engineers (USACE) Parametric Analysis**

Tom Fletcher, Assistant Manager for WTP, provided Board members with a presentation on the Parametric Evaluations of the High-Level Waste and Pretreatment Facility. Tom noted the following key points in his presentation<sup>6</sup>:

- In November 2017, DOE expressed interest in putting PT and HLW into a preservation and maintenance mode while they focused on DFLAW with the available funds.
- Ecology expressed concerns regarding the ability to meet the Consent Decree while DOE put PT and HLW into a preservation and maintenance mode. DOE then asked the Army Corps to evaluate preservation mode as well as the impacts and ability to meet the Consent Decree based on the current level of funding. If that level of funding was not provided, what level of funding would be needed for those scenarios to be achievable? The level of achievable was noted as 80% success.
- The four cases evaluated by the USACE were noted as:

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<sup>6</sup> [Parametric Evaluations of the High-Level Waste and Pretreatment Facility](#)

- Case 1A – Completion of both HLW and PT Facilities
- Case 1B – Completion of HLW Facility Only
- Case 2 – Expedited Completion of HLW Facility
- Case 0 – Completion of Both HLW and PT Facilities with Additional Funding
- Noted as a Class 5 estimate, Tom outlined a full list of assumptions as provided on slide four of the presentation. The cost was estimated by primary functions which included engineering, procurement, construction and commissioning.
- Conclusions provided by USACE included:
  - Case 1A/Case 0: 9% probability of achieving ACD milestones for HLW and PT facilities. The resource ramp up needed would not be achievable technically.
  - Case 1B: 50% probability of achieving ACD milestones for HLW facility.
  - Case 2: 85% probability of achieving ACD milestone for HLW facility.
- In all cases evaluated, only the construction element of the Consent Decree milestone was taken into consideration. A lifecycle analysis was not completed. Additional time will be needed for processing under the identified constraints.
- BNI provided DOE with an estimate basis as well. BNI came up with a similar outcome to USACE. Without a significant increase in funding, the ability to achieve the Consent Decree milestones for startup of HLW treatment was challenged at \$690 million dollars.
- Beginning in early November of 2018, DOE has met with Ecology weekly to establish a path forward. DOE Order 413.3B states that if you exceed five percent of total project cost, you go back to ensure what you are doing is still the right thing. DOE wanted to do this with the partnership of Ecology.
- DOE and Ecology created a technical team identified as the High-Level Waste Optimization team. Lead by Isabel Wheeler of DOE-ORP, they looked at five primary alternatives. Major assumptions for alternatives include:
  - HLW vitrification would occur within the HLW facility currently under construction
  - No major changes to the HLW facility
  - DOE's priority remains the DFLAW program and startup of operations no later than ACD milestone
  - In evaluating any DF-HLW options, consideration should be given to a future role for the PT facility

- The team would focus on technical attributes of each alternative without ranking them based on stakeholder values or other potential design criteria
- DOE hired a contractor in March that is currently performing the analysis of alternatives. A draft analysis report is expected by November 15, 2019.

*Agency Perspective*

Dan McDonald provided Ecology’s perspective on the U.S. Army Corps of Engineers Parametric Analysis. Dan shared that Ecology’s expectations are that the existing Consent Decree and TPA milestones will be met. Dan communicated that Ecology’s participation in both the USACE review and the analysis of alternatives (AOA) does not indicate that Ecology agrees with anything at this point or is suggesting a particular endpoint. At this point, this is all in process. In regards to the USACE, the class five estimate essentially says you will look at analogous facilities and try to make assumptions based on what you feel the analogous facilities are all about. Using a class five estimate which is not at all definitive, requires you to make a tremendous amount of assumptions. Depending on the conversation, a class five estimate is plus one hundred percent minus fifty. A class one estimate is definitive. Neither the USACE report nor the AOA initiative are in any way definitive. There will be a need for much discussion and follow-on conversations prior to making any determination as to what the appropriate path forward may be. Dan shared that if in fact there was enough money to ramp up, there is concern regarding the ability to have the number of resources soon enough to get to the point where there is a high probability of meeting the appropriate Consent Decree or TPA milestones.

***Board Member Questions (Q), Responses (R), and Comments (C):***

*Note: This section reflects individual questions, comments, and Agency responses.*

*Q: “How are you going to know what the sweet spot is? How do you know we have enough information to go forward at this point?”*

R: “It goes back to where we are with the process. I think we have to start with something. We aren’t going to have everything. You can’t make a determination from an engineering standpoint only which is why we are bringing Ecology and their team with it. We will be sure to share that determination with you as well as we go forward. From a perspective of 413 it is a DOE decision. However, we are hoping that we are all aligned when we get there. At \$690 billion, you can’t get it done. We got to find a way to start that mission and start to move it forward.”

*Q: “Are you planning on including Ecology in these meetings?”*

R: “Yes, they have been integrated the whole time. Dan has been at all of the meetings. When I get delivered the draft study plan, Dan will be one of the first to receive it.”

C: “I am very hopeful that we can turn some kind of corner here in terms of transparency and bring us along.”

R: “There is a group that meets every week called the Senior Leadership Forum. At a policy level, Brian Vance is there, Alex Smith is there and other senior-level managers are there. These kinds of discussions are ongoing.”

C: “I want to thank you for being willing to share with us your dilemma. Having been on the Site forever, I am not surprised about this dilemma. I do expect that we will continue to make progress in areas we are working while we are wrestling with this dilemma. I think it’s important to recognize that this dilemma isn’t going to solve itself. The solution to it is not going to be based on the data we have right now. It will be based on new information. There are lots of changes that will affect how this outcome works. I would like to ask that you not be fearful of keeping us on board. Don’t be worried about talking to us about something you don’t have an answer to yet. If you gave us an answer today, it wouldn’t be a very truthful one. We want to stay in this process. I appreciate the discussion you both have had with us today.”

R: “I would suggest we continue to be truthful with you. What I would offer is that no one has stopped. Design comes across, engineering media comes across, certification activities is ongoing, particularly on the LAW side. Decisions are continuing to be made so we are not holding progress on the LAW side. Waiting on answer from the HLW side. In fact, depending on who you talk to, it’s not unreasonable that as we go forward patterning the LAW, we can take advantage of some of that patterning and project it onto HLW to see how applicable it is. Those kinds of things are occurring as we speak.”

R: “I will add one more thing onto that. In terms of continuing the mission, we are spending every dollar that Congress appropriates to us for HLW and PT against those missions. We have continued the necessary design effort on the HLW as well as the technical issue resolution on the PT side. The technical work on PT technical issue resolution is done. I say resolve but remember the definition of resolve is sufficiently, technically and mature enough that we can incorporate it into design where it is then solved. I use the term resolve on purpose because it still has to be incorporated into the design which will ultimately solve all of the technical issues. We are maintaining progress with the available and appropriated funds that were given both on the HLW and PT side to align with the Consent Decree milestones.”

### **HAB Committee Reports**

Board and Committee leadership provided reports on recent activities, ongoing efforts and anticipated products.

#### ***Tank Waste***

Bob Suyama, Benton County and TWC Chair provided an update on the ongoing efforts of the TWC. The TWC has held two committee meetings since the April Board meeting. The TWC also had the opportunity to attend the May 14, 2019 Site tour and see the glass laboratory first hand. During the TWC meetings, the committee had the opportunity to have a discussion on TBI and have an open forum. Bob encouraged other committees to add open forum to their agendas to facilitate open dialogue.

The TWC will not have a committee call in July. The TWC requested an August meeting.

#### ***River & Plateau***

Jan Catrell, Public-At-Large and River & Plateau (RAP) Committee Chair provided an update on recent RAP committee activities. The RAP committee held a joint meeting with the Health, Safety & Environmental Protection (HSEP) committee on May 15, 2019. The committee discussed the 324 Building and high-level contamination. The RAP had a presentation on 618-10 and revegetation efforts

taking place. They discussed committee business and the workplan in preparation for the upcoming leadership workshop. Elections were held for the committee leadership. Jan Catrell was re-elected as Chair and Tom Sicilia, Oregon Department of Energy was elected as Vice-Chair of the RAP.

The RAP committee will have committee call in July. The committee requested an August meeting.

### ***Health, Safety & Environmental Protection***

Rebecca Holland, Hanford Atomic Metal Trades (HAMTC) and Health, Safety and Environmental Protection (HSEP) Committee Chair provided an update regarding the HSEP committee. The HSEP committee had a joint meeting with RAP on May 15, 2019. HSEP addressed several topics including the topic of traffic safety. Folks from the Hanford Fire Department were in attendance to discuss traffic safety related issues. After a presentation and lengthy discussion, HSEP determined there was a need for advice on traffic safety. An Issue Manager team was formed to draft advice to come forward to the September Board meeting. Committee leadership elections were held for the HSEP committee. Rebecca Holland was re-elected as Chair and Richard Bloom, City of West Richland was re-elected as Vice-Chair.

The HSEP committee will not have a call in July. HSEP requested an August committee meeting.

### ***Public Involvement & Communications***

Jeff Burreight, Oregon Department of Energy and Public Involvement and Communications (PIC) Committee Chair provided an update on recent PIC activities. Jeff shared the PIC meet on June 11, 2019. The PIC covered the public involvement update which included public comment activities. Jeff shared upcoming public comment periods that may be of interest to HAB members. The PIC discussed the Hanford Lifecycle, Scope, Schedule & Cost Report at the June meeting. During the discussion, DOE representatives were in attendance to answer committee member questions. The group discussed David Bolingbroke's History of the HAB project. The PIC expects to discuss the TPA public involvement plan at the September PIC meeting.

The PIC committee will not have a call in July. The PIC would like a meeting joint with the BCC in August to move advice forward to the September HAB meeting.

### ***Budget and Contracts***

Tom Galioto, Public-At-Large and Budgets & Contracts (BCC) Committee Chair provided an update<sup>7</sup> regarding the BCC Committee. The BCC held a call in May to discuss potential committee of the whole (COTW) topics in detail. Members provided input into the format that he or she would expect to see the future COTW topics presented to the HAB. Tom shared that the BCC is interested in how Anne White's resignation may affect the status of the Hanford prime contracts. The BCC will continue to follow the status of award of the prime contracts on the Hanford Site. Tom encouraged all members of the HAB to join the BCC.

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<sup>7</sup> [BCC Status Report](#)

The BCC will not have a call in July. The BCC would like a meeting joint with the PIC in August to move advice forward to the September HAB meeting.

### *National Liaison*

Pam Larsen, City of Richland and National Liaison provided Board members an update on current events. Pam's report included the following:

#### **EM Program – Headquarters (HQ)**

Assistant Energy Secretary of EM, Anne White resigned effective June 14<sup>th</sup>. It is expected that the end-state contracting approach she initiated will go forward.

Ike White, Chief of Staff and Principal Deputy Administrator of DOE's National Nuclear Security Administration (NNSA) will now manage the EM program as a Senior Advisor to the Undersecretary of Energy. White is a longtime federal employee who has held management posts at the NNSA, including deputy associate administrator for safety and health. He has also worked at the Defense Nuclear Facilities Safety Board. It's not expected that Mr. White will be put forward by the department for Senate confirmation.

Tod Schrader, DOE Carlsbad Field Office Manager for the past four years will become the Principal Deputy Assistant Secretary for EM. This position is referred to as EM-2. Tod has previously worked at the Pacific Northwest National Laboratory before going to DOE-HQ. He is very familiar with Hanford's Tank Waste program and Waste Treatment Plant. He supported Energy Secretary Chu's S-1 team that looked at a variety of WTP technical challenges. He has done an outstanding job of running DOE's Carlsbad field office.

#### **Budget**

The House Appropriations Committee on May 21, approved a plan to fund the EM program at about \$7.2 billion for fiscal 2020. This number is up from the \$5.6 billion requested by the White House. The Office of Management and Budget (OMB) complained that the plus-up came from reducing the budget for the nuclear weapons programs. Much of the increase went to DOE-RL. The total Hanford funding for both offices is about \$2.4 billion.

The Senate has yet to start its own appropriations process. However, the Senate Armed Services Committee on May 23<sup>rd</sup> approved their National Defense Authorization Act. This act has not been approved by the full Senate.

#### **Procurements**

Hanford Mission Essential Services – MSA \$4 to \$6 billion – RFP September 2018

Hanford Tank Closure - \$10 to \$15 billion - Bids submitted in March 2019

Hanford Central Plateau - \$7 to \$12 billion

Nevada Environmental Program - (NTS) \$250 to \$400 million - Final RFP expected in July

Savannah River Paramilitary Security contract - \$600 million to \$1 billion Bids closed in May

Hanford 222 – S laboratory \$600 million to \$1 billion Bids closed in April

## **Information from around the EM Complex**

### **Oak Ridge**

Oak Ridge was home to five massive gaseous diffusion plants, comparable in size to more than 5 football fields. These facilities were used to enrich uranium for defense and commercial purposes until the plant was shut down in the mid-1980s. They recently removed the slab under the K-29 building preparing the land for eventual economic development for the region. Since cleanup began in 1998, they have torn down nearly 500 facilities and transferred 1,300 acres for economic development and a 3,000-acre conservation area.

### **Idaho**

The transuranic waste mission should complete this summer. 6,500 cubic meters remain to be certified and transported to WIPP. This work began in 2003 and the material came from Rocky Flats. A voluntary separation package has been offered for 190 people.

The Waste Treatment Unit (steam reforming) is finally getting closer to starting up. They did a 50 – day run treating 62,200 gallons of simulant. The test showed modifications made to the reactor vessel worked. They are now going into a several-month outage to make final tweaks to prepare for operations. The facility was built to treat 900,000 gallons of sodium-bearing waste now stored in stainless steel tanks. The facility was completed in 2012 but has failed to start operations.

### **Savannah River Site**

A new low-cost strategy using microorganisms found in nature is safely removing chemicals from a groundwater plume. Workers will inject 36,000 gallons of a mixture with microbes, vegetable oil, water and vitamins B-12 and C through pipes into the groundwater aquifer to get rid of contaminants including TCE.

The oil and microbes mix with groundwater and coat particles of sand and clay in the subsurface. The TCE flowing through the area sticks to the oil, where both are ingested by microbes, resulting in harmless substances consisting of ethane and chloride.

This treatment involves a one-time injection of a small amount of oil to a large quantity of water over 3 to 5 years. Remediating the groundwater using microbes and oil costs 30 to 60 percent less than traditional TCE remediation approaches.

The \$2.3 billion Salt Waste Processing Facility remains on track to begin operations by the end of the year. It will process millions of gallons of radioactive salt waste generated by weapons production. It is projected to begin processing at a rate of 6 million gallons per year. It will ramp up to 9 million gallons

annually. There is roughly 35 million gallons of liquid waste stored in 30 + underground tanks at SRS. About 90 percent is salt waste and the rest is sludge.

## **Portsmouth**

The Portsmouth Gaseous Diffusion Plant operated from 1954 to 2001 and enriched uranium, first for nuclear defense purposes and later for commercial power plants. Remediation of the facility started in 1989.

In April an analysis done by the northern Arizona University of a middle school 2 miles from the plant, detected trace amounts of enriched uranium within the building and neptunium-237 in a nearby air monitor. The trace amounts were respectively 1,000 times and 10,000 times below the established thresholds of public health concern. Previous DOE sampling also found only trace amounts of radioactive contaminants which were well below levels that would pose a risk to health.

DOE has agreed to pay for additional outside testing that will be analyzed by independent labs.

## ***Environmental Management Site-Specific Advisory Board***

Susan Leckband, League of Women Voters and Board Chair provided an update on EM SSAB activities. The recent EM SSAB Chair's meeting was held at the Savannah River Site May 7-8, 2019. Those in attendance from Hanford were Susan Leckband, Shelley Cimon, JoLynn Garcia, Jim Lynch, Carrie Meyer, and Dana Cowley. It is the 30<sup>th</sup> anniversary of Environmental Management. Highlights from the budget hearing include 107 Sites down to 16 Sites across the complex. Square miles of active cleanup have been reduced from 3,000 to 300. The cleanup remaining is considered first of its kind.

The new contracting strategy has been characterized as "completion-centric mode." This can be seen reflected in the new contracting strategy. The contract will be awarded and then tasks will be negotiated. As the contract structure is very confusing, Susan does not expect the Board to see the contract until all negotiations are completed. Susan shared that individual milestones should be negotiated locally and not at HQ level.

The 10-year plan may not be as applicable at Hanford as it may be at other sites. There is a constant search for efficiencies due to funding needed to complete the work. DOE will continue to look at "hotel" costs. "Hotel" costs were noted as the costs needed to safely maintain the Site. Safety was noted as the most important aspect of cleanup.

## **Board Business**

### ***HAB 25<sup>th</sup> Anniversary Celebration***

The HAB will host a 25<sup>th</sup> anniversary celebration in September. Susan encouraged members to provide any pictures or historical documents they have to the facilitation team. The 25<sup>th</sup> anniversary celebration will be held at the Best Western PLUS in Richland, WA.

## ***COTW Topics***

Members took time to have a roundtable discussion providing input to the TPA Agencies regarding which outlined potential COTW topic they would like to see supported in FY19 and FY20. Members shared their thoughts, feelings and expectations on potential topics.

HAB-Identified COTW Topics include:

- Aging/High-Risk Facilities
- Critical Infrastructure
- Hanford Budgets
- Regulatory Reform
- Risk
- Test Bed Initiative
- Waste Incidental to Reprocessing
- Waste Reclassification
- Hanford Cleanup End States
- Hanford Land Use Plans
- DOE 10-Year Plan
- DOE Lifecycle Scope, Schedule & Cost Report
- Army Corps of Engineers Parametric Evaluation
- NAS Report – Alternative Tank Waste Treatment
- GAO Report on DOE Site Cleanup Liability

HAB Leadership will continue the discussion at the upcoming leadership workshop.

## ***Potential Products for September Meeting***

Potential products for the September HAB meeting include:

- Draft Advice on Traffic Safety from HSEP
- Letter of Appreciation for the completion of 618-10 from RAP
- Draft Advice on Cleanup Budget Public Involvement & Disclosure from PIC/BCC

## ***Closing Remarks:***

Susan Leckband, Chair thanked Board members for their attendance, thoughts and decisions. The meeting was adjourned.

**Attachments**

**Attachment 1:** Agency Update (DOE Presentation)

**Attachment 2:** Agency Update (Ecology Presentation)

**Attachment 3:** Draft Letter: DOE’s Enhanced Waste Glass Program

**Attachment 4:** EM SSAB Chair’s Recommendation: EM’s Review of Cleanup Milestones

**Attachment 5:** EM SSAB Chair’s Recommendation: Improving EM’s Science and Technology Program

**Attachment 6:** Parametric Evaluations of the High-Level Waste and Pretreatment Facility

**Attachment 7:** BCC Status Report

**Attendees**

**Board Members and Alternates:**

Gene Van Liew, Member	Shelley Cimon, Member	Gerald, Pollet, Member
Helen Wheatley, Alternate	Susan Leckband, Member	Paige Knight, Member
Antone Brooks, Member	Margery Swint, Alternate	Kristie Baptiste- Eke, Member
Dana Miller, Member	Julie Atwood, Alternate	Bill McKay, Alternate
Rob Davis, Member	Pam Larsen, Member	Richard Bloom, Alternate
Bob Suyama, Member	Larry Lockrem, Alternate	Gary Garnant, Member
Phil Lemley, Alternate	Rebecca Holland, Member	Tom Carpenter, Alternate
Dan Solitz, Alternate	Jeff Burright, Alternate	Rudy Mendoza, Alternate
Steve Wiegman, Member	David Bolingbroke, Member	Tom Galioto, Member
Emmett Moore, Member	Richard Jaquish, Alternate	Kristen McNall, Member (Phone)
Liz Mattson, Member (Phone)		

**Agency, Contractor & Support Staff:**

JoLynn Garcia, DOE-ORP	Randy Bradbury, Ecology	Brian Vance, DOE
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Joe Franco, DOE-RL	Ben Harp, DOE-ORP	Alex Smith, Ecology
John Price, Ecology	Dave Einan, EPA	Joe Franco, DOE-RL
Jennifer Copeland, CHPRC	Dana Gribble, MSA	Bill Hamel, DOE
Mark McCusker, DOE	Peter Bengtson, WRPS	Scott Danz, MSA
Mike Priddy, WA DOH	John Price, Ecology	Kyle Rankin, DOE-RL
Theresa Bergman, CHPRC	John Eschenberg, WRPS	RP Detwiler, DOE-RL
Mark Heeter, DOE-RL	Jeff Bird, DOE-RL	Brian Stickney, DOE-RL
Greg Jones, DOE-RL	Gary Yoonger, DOE-ORP	Glyn Trenchard, DOE-ORP
Tom Fletcher, DOE-ORP	Dave Einan, EPA	Dan McDonald, Ecology
Ryan Miller, Ecology	Ginger Wireman, Ecology	Stephanie Brasher, MSA (Phone)
Jennifer Colborn, MSA (Phone)	Stephanie Brasher, MSA (Phone)	

**Members of the Public:**

Lindsay Strasser, ProSidian	Sherri Schatz, ProSidian	Anne Wallenhaupt, ProSidian
Annette Carey, Tri City Herald	Ian Spiracle	Jody Lisberger