



FINAL MEETING SUMMARY

HANFORD ADVISORY BOARD

November 8-9, 2017

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 Action

There were two pieces of advice adopted during the November Hanford Advisory Board meeting.

Hanford Board Business

The Board will hold one committee call in November. The Board discussed the following:

- FY18 proposed Work Plan
- FY18 proposed HAB calendar
- Draft Advice: Hanford Site Budget
- Draft Advice: State of the Site Meetings
- Scheduling for upcoming committee meetings and phone calls
- Potential topics for a Committee of the Whole meeting
- Potential products for the March Hanford Advisory Board meeting

Presentations & Updates

The Board received the following presentations and updates:

- Tri-Party Agreement (TPA) Agency Updates
- Site Priorities “45-Day Review”
- Draft Advice: Hanford Site Budget
- Draft Advice: State of the Site Meetings
- HAB Committee Reports
- Discussion of Technologies

Public Comment

There were no public comments received at the November meeting.

Susan Leckband, League of Women Voters and Board Chair called the HAB 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, Introductions, & Announcements

Dawn MacDonald, Department of Energy Office of River Protection (ORP) and Co-Deputy Designated Federal Officer for the HAB, noted that the Board was a meeting in accordance with the Federal Advisory Committee Act (FACA).

Susan Leckband provided members with an overview of the meeting agenda and objectives. Susan introduced four new board members.

- Kristie Baptiste, Nez Perce Tribe
- Jack Bell, Nez Perce Tribe
- Todd Martin, Citizens for a Clean Eastern Washington
- Lindsey Schneider, Hanford Watch

Susan confirmed the adoption of the June 2017 Board meeting summary.

Lindsay Strasser, HAB facilitator, provided members with informational announcements.

Tri-Party Agreement Agency Updates

U.S. Department of Energy – Richland Operations Office

Tom Fletcher, U.S. Department of Energy – Richland Operations Office (DOE-RL) Deputy Manager, provided HAB members with a presentation highlighting recent Hanford Site activities. Tom noted the following key points in his presentation:

- Tom gave an overview of the Richland Operations Office 2020 Vision, which is the work scope that RL hopes to accomplish under approximately one billion-dollar budget. This started in 2016, but only 900 million has been received so far.

324 Building

- The 300-296 waste site is located under the 324 Building, which was found during the demolition process. They called this hot cell “B-Cell,” which was previously used for vitrification science. During the time of vitrification science, there was a spill of a cesium liquid stream that had leaked through a crack on the bottom of the B-Cell liner into the soil. The waste site is between 12,000-14,000 R per hour, which equates to a lethal dose within 2-3 seconds on contact. There are 3 cells in front of B-Cell and an airlock door between A-Cell and B-Cell. The airlock is currently undergoing clean out of soft debris.
- The mockup building of the 324 building is currently under construction with the holes for the remote “John Deer” excavator arms being drilled. There will be two remote arms with a transfer cart installed with the plan to remove 24-36 inches of soil around the perimeter of B-Cell, where

the leak occurred. The soil will be put into waste bins, which will then go into A-Cell, B-Cell, or C-Cell and grouted as they go. The progress will continue through FY2018 and into FY2019.

618-10 Burial Grounds and Associated Waste Sites

- 618-10 is in the finishing process of sampling and backfilling, with completion in the next couple of months. Both 316-4 and 600-63 have been remediated and backfilled. Once 618-10 is completed, the River Corridor Milestone will be accomplished. The next stage will be revegetation into FY2019.

K Area Sludge Removal

- The project to move the K Area sludge off the river has been ongoing for many years. The K Basin Pre-Operational Acceptance Testing (KPAT) has been completed. Operational Testing is now underway. Basin water has been transferred from the basin in through the Engineered Container Retrieval and Transport System (ECRTS), which is the storage system for the sludge, and back into the basin again. Once the Operational Testing is completed, the Operational Readiness Assessment will begin.
- T Plant is currently undergoing a readiness assessment, which will receive the canisters from KW Annex and be stored below deck under one of the cells until an ultimate disposition path is determined.

Soil and Groundwater Remediation

- In FY2017 we reached 2.2 billion gallons of treated groundwater, which tested above drinking water standards. There has been significant progress in the reduction of H Area Plume in the groundwater between 2015 and 2016. In 2011 with the recovery act stimulus funds, the Site was able to install additional systems and equipment, which allows for remediation. The Site is in the stages of remediation both in the River Corridor and on Central Plateau with the 200 West Pump and Treat Facility.

Plutonium Finishing Plant

- Since the last update in June, the Plutonium Finishing Plant (PFP) has become “Criticality Incredible State” for the first time since start up. PFP is making continual progress daily. PFP demolition has the main process lines in the center of the main facility and the concrete sections left to be demolished.
- PFP demolition is on schedule to be completed late 2017 or early 2018 for the slab on grade. There are currently two crews with two shifts and a back shift doing all of the refueling and maintenance on the equipment. One crew does the tear down and the other crew does size reduction and processing. The waste collected from PFP will then go to ERDF.
- Plutonium Reclamation Facility (PRF) demolition restarted in early November and successfully removed two of the gallery glove boxes on both the east and west side of PRF. On June 8, 2017, a Continuous Air Monitor (CAM) alarm sounded at the PRF during the removal of one of the glove

boxes. PFP employees were instructed to take cover. As the team re-entered and surveyed the area, the boundaries for the airborne radiation area were significantly expanded. To ensure safety of the employees in the area, the equipment, people, and trailers were moved further out.

Plutonium Uranium Extraction (PUREX) Tunnels

- In May 2017, PUREX Tunnel 1 collapsed causing a 20x20 hole. Since that time, it was determined under the existing contingency actions within the RCRA Permit to backfill for stabilization. Trench boxes were installed on the southside of Tunnel 1 for the grout flow testing. Since the grout had to travel 250 feet from the injection point to the tunnel, testing would determine the characteristics of the grout and ensure the proper consistency to flow the distance it needed too. A total of 4,400 cubic yards of material was poured into Tunnel 1. The grout placement and stabilization of the tunnel is near completion. A final remediation plan will be determined at a later date.

Safety, Security and Infrastructure

- DOE-RL has a responsibility to maintain the infrastructure thus ensuring operations at both the Richland Operations Office and The Office of River Protection. This past summer, sections of Hanford's aging water system were replaced to ensure necessary fire protection, construction water, and other support to the Central Plateau. A new wireless system was installed for improving the communications on Site.

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

Glyn Trenchard, U.S. Department of Energy – Office of River Protection (DOE-ORP) Assistant Manager of Tank Farms, provided HAB members with a presentation highlighting recent ORP activities. Glyn noted the following key points in his presentation:

Tank C-105

- The first phase of retrieval using the Mobile Arm Retrieval System (MARS) removed 92,000 gallons of waste between June 2014 – September 2015. In August 2017, a switch to an Extended-Reach Sluicing System was made to allow for the retrieval of 30,000 gallons of waste material, with 4,500 gallons left to retrieve.
- The vapor controls being used during retrieval operations enhanced the ventilation stack monitoring, Industrial Hygiene (IH) monitoring, and air monitoring. To ensure safety of personnel, protection suits and supplied air are used for protection from contamination.
- DOE-ORP in joint with U.S. Department of Ecology (Ecology) developed and implemented High Resolution Resistivity (HRR) to measure the resistance in the soil around and under the tank to detect any leaks. Results are monitored daily with no changes or issues found.
- C-105 retrievals went through demonstrations of different technologies through different phases of retrieval at the same time. One tank underwent the construction phase to place equipment for

retrievals. A second tank underwent active retrievals. A third tank is undergoing an administrative evaluation and report-writing phase. A fourth tank went through a design phase.

A-AX Farm

- A-AX are single shell tanks that do not have a robust and complaint infrastructure, which requires the installation of electrical power, ventilation system, water, and transfer lines. Once infrastructure is in place and established for most of the tanks, retrievals can begin.
- AX-102 and AX-104 are the first tanks set for retrieval once the new equipment is installed. Installation of equipment into Building A285 (air and water service building) includes three water skids. Building A285 will allow for the ability to add caustic into the individual tanks. In addition, two exhausters will be installed in A Farm, once fabrication is complete.

242-A Evaporator

- The ventilation stack at the 242-A Evaporator was extended from 63 feet to 111 feet, this past summer. In the evaporator, the waste is purposefully concentrated through the building exhaust. This will ensure that the chemical vapors and orders are dispersed away from personnel.
- Two evaporator campaigns were completed this year, which equates to 525,000 gallons of waste volume reduction. This contributes to the total of 84 million gallons of liquid removed from tank waste since operations began in 1977. As waste is moved around in single-shell tank retrievals, water is often added. The evaporator is key to ensuring the water is evaporated out.

Liquid Effluent Retention Facility

- The Liquid Effluent Retention Facility (LERF) and the Effluent Treatment Facility (ETF) receives the clean liquid from the evaporator, where it is filtered to drinking water standards and discharged at a state approved land disposal. LERF has a total of three basins of which each holds 8 million gallons of wastewater.
- In Basin 43, a polyethylene synthetic rubber cover is rolled out on top of the leak detection liner, which is then heat sealed together. The new cover is noted for its resistance to chemicals, extreme temperatures, and ultraviolet light.

Double-Shell Tank AY-102

- In February 2017, retrieval operations were completed ahead of the March 2017 due date. AY-102 is currently undergoing an inspection phase. Multiple visual inspections were performed between April 2017 and October 2017. Using high-definition video cameras, the visual inspections determined seven through-liner leak sites on the tank floor. Data collected from the inspections indicated pitting corrosion as a contributing factor for the cause of the leaks. Washington River Protection Solutions (WRPS) is currently working on an evaluation to determine if the tank will be repaired or closed. The next step to the process is a recommendation letter from WRPS to DOE-ORP as early as today. Once the recommendation letter is received, DOE-ORP will work with Ecology to determine the path forward with AY-102.

- The AY-102 Recovery Project was named International Project of the Year by the Project Management Institute at the October 28, 2017 Global Conference. In addition, DOE Environmental Management (EM) also won a Project Excellence award for the AP Ventilation System Replacement.

Heat Stress Monitoring Data

- In FY2017, tank farm workers were monitored using physiological monitoring over 1,900 times. Over this past summer, there were no heat-related disorders reported. The most used monitor was the Nonin heart rate monitor, which was used 1,425 times. The Polar H7 heart rate monitor was used 284 times and the Braun Thermoscan (body core temp) was used 197 times.

Waste Treatment and Immobilization Plant

- There have been some technical issues with pretreatment, which are being evaluated. With the Direct-Feel Low-Activity Waste (DFLAW) process, low-activity can treat a vast majority of the waste without needing pretreatment.
- The future Low-Activity Waste Pretreatment System (LAWPS) Facility will filter and ion-exchange the waste before going to the Low-Activity Waste (LAW) Facility. The LAW Facility converts the waste into glass. The Effluent Management Facility (EMF), which is an evaporator, will take the off-gas and condensate it before sending it back to Tank Farms.
- Two 300-ton melters were assembled and installed at the LAW Facility. These melters will be able to produce five containers per day. The melters are the largest of its kind built in the United States.
- At the High-Level Waste Facility, a Preliminary Documented Safety Analysis (PDSA) was approved in September 2017. DOE is currently considering options for the facility with a focus of DFLAW.
- At the Pretreatment Facility, there are eight technical issues currently underway. Three of the eight were resolved in early 2017, which are the hydrogen in the vessels, hydrogen in the piping, and criticality in the pulse jet mixers. The fourth technical issue was completed in September, which is the final testing of the full-scale Pulse Jet Mixing vessels. The test results will be used to determine the final design of the vessels intended for use at the Pretreatment Facility. The remaining technical issues anticipated to be resolved in 2018.

System Plan, Rev. 8

- The System Plan is a thorough process that required a large amount of work to complete. The start of the process in joint with Ecology and WRPS was to determine the basic assumptions for the System Plan. The analyzation of different individual scenarios will assist in determining theoretical achievable approach for completing the River Protection Plan (RPP) mission, which is based on conditions, constraints, assumptions, and policy direction.

- In System Plan 8, one scenario analyzed was the DFLAW. The specific scenario analyzed a slightly different approach of DFLAW using risk informed retrieval approach or accelerated retrievals requiring newly built DSTs.
- On October 31, 2017, the System Plan 8 was delivered to Ecology per the TPA Milestone M-062-40, which is required every three years.
- In comparison to System Plan 6, System Plan 8 baseline case forecast a significant increase in mission duration and cost.

Secretary Rick Perry Visits WTP

- In August 2017, U.S. Secretary of Energy, Rick Perry and Deputy Secretary of Energy, Dan Brouillette toured (WTP), including other Hanford facilities. Both Secretary Perry and Deputy Secretary Brouillette expressed support for Hanford.

New DOE-ORP Manager

- At the end of September 2017, former DOE-ORP Manager retired after 40 years of federal service, including 13 years with EM and the National Nuclear Security Administration (NNSA).
- On November 6, 2017, Brian Vance began work as the new DOE-ORP Manager. Mr. Vance previously worked as the project director at CH2M Hill Plateau Remediation Company (CHPRC). Mr. Vance brings 30 years of leadership experience on nuclear-related projects.

U.S. Department of Ecology

Alex Smith, Washington State Department of Ecology (Ecology) Program Manager, provided Board members with a presentation highlighting recent Ecology activities. Alex noted the following key points in her presentation:

- The current Sitewide Permit in effect is Rev 8c. In 2017, there have been a total of 43 combined completed and in process modifications. This includes 29 Class 1 modifications, 8 Class 2 modifications and 6 Class 3 modifications.
- Ecology has been working on renewing the Sitewide Permit since 2012, which is required every ten years. The initial Rev 8 Permit was not received well by U.S. Environmental Protection Agency (EPA). Ecology is diligently working with EPA and the Site to improve processes. Ecology put together an 80-page schedule for managing permit completion activities. Ecology is working on identifying major themes across all the various units within the permit and have moved on to the unit-specific issues.
- During DOE's annual inspection of the PUREX Canyon Facility, a white powdery substance was found. The amount of white powder found during the annual inspections increase every year. Ecology has asked DOE to sample the white powder and designate it for RCRA purposes, which a response has not been received. Ecology issued an order requiring DOE and CHPRC sampled

the white powder. A \$16,000 penalty was associated with the order. Since the order and penalty was issued, DOE has completed the sampling, but appealed the order and penalty.

- Ecology issued an order that required an integrity assessment of both PUREX tunnels and a plan for stabilizing the tunnels. The plan for Tunnel 1 was to grout the tunnel, which is near completion. Ecology did not receive a plan for Tunnel 2, as DOE decided to convene an expert panel to determine various options. The panel has completed the plan and issued a report, in which Ecology is expecting to be briefed soon. The deadline for the plan is December 8, 2017 for Tunnel 2.
- 240 gallons of liquid was discharged on two different occasions in August from three ERDF “cans.” Ecology was notified a month after the liquid was discharged. The compliance team is gathering information and conducting an investigation. Once the investigation and report are complete, Ecology will determine the conclusion and path forward.
- The System Plan 8 was required by the TPA as a way of envisioning the tank waste mission to determine other ways to make the process more efficient. The System Plan is a modeling exercise to help inform TPA milestone negotiations. Ecology submitted a letter to DOE asking for the TPA milestone negotiations to be scheduled in January.

Environmental Protection Agency

Laura Buelow, U.S. Environmental Protection Agency (EPA) Acting Hanford Project Program Manager, updated HAB members on recent EPA Activities. Key points covered in Laura’s update:

- Dennis Faulk, EPA Hanford Project Manager, retired in late August 2017. Dennis worked for EPA at Hanford since 1991. Laura Buelow is now the acting Manager for 120-day detail.
- There are four Project Managers at EPA’s Hanford Project Office. EPA has posted a Manager position for hire. This position could possibly be in the Tri-cities or Seattle. The job location is decided until the position has been filled.
- EPA Region 10 has hired a Regional Administrator, Chris Hladick. Mr. Hladick comes from Alaska as the Alaska State Commerce Commissioner. Mr. Hladick will be based in Seattle.
- The Records of Decision (ROD) for the Superfund sites that are 50 million or above, are now requiring signature by EPA Administrator Scott Pruitt. EPA is working with DOE, Ecology and the Yakama Nation to work through other issues before it goes back up for signature.

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

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

Q: “Where are you going to dispose of the 324 waste?”

R: “The 324 waste will be moved as a monolith and will be disposed of at ERDF.”

Q: “Can you explain what the K Basin Sludge is and where it will be disposed?”

R: "Yes. The K Basin has all the sludge that has been collected on fuel which was put into the basins and over time degraded. The sludge is sand and gravel, but also has a lot of radioactivity from the degrade fuel. The fuel was collected as a process both in K East and K West, which is all contained into six containers within the K West Basin. The contents in the containers will be removed and put into canisters, which will be removed off the river and into the T Plant for storage until a future disposition path has been determined."

Q: "When you say you are treating it, is it mostly chemicals, such as chromium opposed to radioactivity? Or is the radioactivity being removed also?"

R: "Both, but depends on what Plume you are talking about. For the River Corridor, the major contamination is Hexavalent Chromium, which was used as a corrosion inhibitor for the single pass reactors. So, this is the major contamination along the Columbia River. For the Central Plateau, the major contamination is Carbon Tetrachloride, but in addition to this contaminate, Uranium is also removed from the contaminated wells."

Q: "Can you give us a sense of scale?"

R: "The main facility in the center of PFP is 1,000 feet long, so the High Contamination Area/Airborne Radioactivity Area is about a half mile from each side."

Q: "How will you be characterizing the waste under the slab, as this has been a concern? What is the plan to move forward?"

R: "The main project today to move on to the slab on grade. As we look to the future, we are look at soil remediation in the Central Plateau. We will drill through the slab and characterize under the slab which will be very similar to what was done to other slabs."

Q: "Do we have a decision on where the Plutonium found near the Rattle Snake Barricade originated from?"

R: "As you know this past summer, the Department of Health monitors went off near the Rattle Snake Barricade. We do not have definitive answers where the Plutonium and Americium originated from. The isotopes found did not match the isotopes in the waste at PFP, so we don't think it came from there."

Q: "How were the boundary lines determined given the fact that the Department of Health found contamination at the Rattle Snake Barricade? What is the logic behind these lines? How do you decide where to stop the boundary lines?"

R: "What you don't see in the presentation is that there is a significant air modeling background that goes along with this demolition that PNNL has done and has continued to update as we have torn down facilities. We don't have a connection from PFP and Rattle Snake Barricade, but as a precaution, we moved the boundary lines farther back."

Q: "DOE Headquarters chose not to sign the HAB membership packets for many months, which created a lot of concern. DOE Oregon in particular was dismayed and concerned by the lack of meetings, as we consider the HAB very important regarding the work at Hanford. What do you know about the process

and why was there a delay? What is the impact now on the HAB? Has anything been done to prevent this from happening again?"

R: "From an approval package perspective, with any new change of administration, everyone from the bottom to the top wants to look at what is going on. As we have mentioned many times before, the HAB is very different from the rest of the FACA driven boards and its membership. This created interest at the Headquarters level that required additional insight and review all the way up to the 7th floor. This is what the delay is really about, the fact that the HAB is different. As of today, I don't know if there is an impact to the HAB. Absolutely it could happen again. Locally, this does not diminish the impact and respect had for the HAB. Be cautious of where you go in the future, as this administration is willing to make changes at any time. The administration could make the HAB like the other boards."

C: "I inquired about the packages and interestingly Stacy Charboneau, who is now at DOE HQ, really went to bat for us to get the packages renewed. My understanding was that the people on the 7th floor did not know whether or not they have the authority to re-appoint the packages or if they had to get approval from the White House. Candace (Trummel) Robertson, who is a former county commissioner for Nevada, told the 7th floor that they did have the authority and the packages were approved."

Q: "Can you give an update on where you're at with the performance assessment? Also, I am really confused about the D&H Record of Decision, as I thought the work has already been done the money has been spent. Is that correct?"

R: "All of the work done along the River Corridor was done on an interim ROD. This was the only way to get out on the field quickly. The rest of the work being done on the River Corridor is being conducted on normal ROD. Anytime we have work being conducted under interim ROD, we have to go back and evaluate for a full ROD, so that is what is going on with D&H."

R: "The IDPA is at the Low-Activity Waste Review Group (LAWRG) under review."

Q: "In regards the grout being used, was there ancileach or getters used in the grout? Were there studies done? How was formulation of the grout determined? How does this grout compare to the castone formulation used in previous studies?"

R: "No, we did not use castone for the grout formulation. We used a standard grout, as we were trying to stabilize the tunnel. We did not go for a getter, as this is not a final disposition of the tunnel."

Q: "Regarding the vapor program, are there organic compounds found above IH levels?"

R: "There are 58 chemicals of potential concern, but we have not encountered any chemicals above the Occupational Exposure Limit (OEL). Samples are being taken around the farm for monitoring. All of the data collected is available on www.hanfordvapors.com."

Q: "Can you address the worker uptakes following the release of contamination at PFP? How are you handling the situation? How are you communicating with workers regarding the uptakes?"

R: "CHPRC has done a great job in regards to communication with the workforce. NIOSH is on site as a second communication tool for the workforce as well."

Q: "Can anyone address the merger of the DOE-RL and DOE-ORP offices in 2019?"

R: "Current legislation has a sunset clause that would allow RL and ORP to come back together. I don't think there has been any actions afoot that would happen sooner, but I can tell you there are two very different cultures between the two offices."

Q: "There was an article in the herald regarding low-level waste being shipped off site. Can you discuss that activity and what is the plan for that?"

R: "There was three gallons of test bed samples from 222-S lab that was shipped to Permafrix and grout. It was then shipped to WCS in Texas. It was a test program to go through those steps to evaluate the process."

Q: "What is the plan for revegetation with all the recent fires this year?"

R: "In those specific areas, natural revegetation has started of green growth. This isn't a direct plan as to whether or not the site will go and plant new sagebrush."

Q: "Was there any facilities damaged or close to being damaged by fires?"

R: "The silver dollar fire was the major fire this year, which burn up to the north of 222-S area and in the corner of CWC. There were pump and treat lines damaged in the 100 area, but no facilities. CH2M Hill has replaced those lines and is back up and running again."

Q: "What was the white powder found at PUREX?"

R: "We have not received the final report from DOE, but it has alluded to be sodium bicarbonate."

C: "It is very disappointing to see that DOE placed a contingency on re-upping the HAB upon the decision to not fund two members coming to the meetings. It really limits the amount of voices that are possible for the HAB, especially for regional members who have fulltime jobs or single parents. It also speaks to change in process."

R: "Again, with the new administration, they looked at what was consistency and in this case, they decided to be consistent."

C: "In regards to the RL/ORP merger, I believe it's an incredible threat to the Hanford budget. In talking with the congressional staff, they believe they would not have been able to receive the level of funding for the office if they were merged. I think this is an issue that the HAB should look at and provide advice on."

Q: "Is the K Basin waste transuranic (TRU)?"

R: "Yes, the K Basin waste is TRU."

Q: "What project were delayed, if any, as a result to money spent of PUREX?"

R: "The benefit to PUREX is that we had extra CR funds, which were used to mitigate the cost for PUREX Tunnel 1."

Site Priorities: 45-Day Review

Tom Fletcher and Glyn Trenchard provided HAB members an overview of the 45-Day Review.

Tom Fletcher: “The initiative is based around timely decision making. This means that decision that were in the background are being put back on the table. Acting EM, Jim Owendoff started the 45-Day review for this purpose, which is the help make timely decision that generally languish over time. For example, DOE-RL and the TPA Agencies are working cohesively on streamlining the process for timely decision making regarding the CERCLA and RCRA when it comes to cleanup. Another example is the Hanford Integrated Priority List (IPL), as the questions remains as to what is going to be done with cleanup on a site level. The IPL is driven by priorities across the site. The discussions or focus points for the DOE-RL 45-Day Review initiatives is how the resources will be expended and process related.”

Glyn Trenchard: “Echoing on some of what Tom stated, the focus is to build momentum and instill a sense of urgency, complex-wide. It’s looking at key decisions across the complex to drive to a timely completion. The initial response to the 45-Day Review was the possibility of asking for more money, but HQ responded stating that there was no more money. When looking at it, we are thinking about the opportunities. One of the ideas was to use the concept of the Grand Challenge Workshop and spread it out across the complex. We look at the regulatory reform when it comes to the rules and requirements that DOE orders that DOE-ORP does not see utility in, as well as, ways to accelerate projects. It’s a unique time for DOE, EM, and government as a whole, there is a lot of support.

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

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

Q: “Can you give the members some background on the title of 45-Day Review?”

R: “*The 45 days promotes a sense of urgency. Jim Owendoff, Acting EM 1, talked about his interview for the job, which he was ask what he hoped to accomplish in the first 45 days. This drove what he wanted to do in the first 45 days, which he calls a bias for action.*”

Q: “Is there a lot of money not being spent or personnel not being employed due to decisions not being made?”

R: “*No. There are a lot of decisions being made. The decisions for today are more looking to the 3-5 years from now and how the resources are determined going forward on the longer-term mission or cleanup decisions.*”

C: “I have some concerns with this, as you are having to come up with new scopes of work when you have a plan. DFLAW is a plan already in place that is the goal. The issue is that we need 4 billion in reality. Another issue is the infrastructure, as we are running everything to failure. This is not serving Hanford well financially and certainly not environmentally.”

R: “*DFLAW is very much still a high priority. We have a lot of support from the DOE Secretary and Deputy Secretary on DFLAW. Hanford takes 40% of the EM budget and that is not changing. Although I may agree with you, it is highly unlikely Hanford will get 4 billion a year. In regards to infrastructure, DOE-RL committed to funding the infrastructure about 30-40 million dollars annually. In addition, DOE-*

RL asked for 15-20 million for risk mitigation for 2018. To be realistic, the current min-safe between DOE-RL and DOE-ORP is 1 billion dollars. So, when looking at the budget in total, it is really only 1.2 billion.”

Q: “Have the 45 days started? Is there a list? If so, where is it?”

R: “There literally is no list. There is a list of ideas we generated but there is no list out of Headquarters.”

Q: “When will the HAB be briefed on what was done and implemented regarding the 45-Day Review?”

R: “We have no issue coming back and briefing the HAB again.”

Q: “What can the HAB do in regards to advice? When you have the list, will it be available publicly?”

R: “I don’t know about the list being made public. Bureaucracy does play in the RL and ORP system. We are here to share as much information as we publicly can and the process of that. As decisions are being made, RL is willing to share with the HAB.”

Public Comment

There were no public comments.

Draft Advice: Hanford Site Budget

Susan Leckband, Board Chair introduced draft advice on the Hanford Budget, which was brought forward by the Budget & Contract Committee (BCC) Chair, Jerry Peltier and Ken Niles, BCC member. Mr. Peltier and Mr. Niles were not in attendance for the review of draft advice. Susan stated that it is essential to provide budget advice given the 45-Day Review and the impact of priorities.

Mr. Peltier presented the draft advice during the August 2017 committee week. Members of the River & Plateau Committee, Tank Waste Committee and the Health, Safety and Environmental Committee had an opportunity to provide comments on the draft advice.

Susan asked if any HAB members had any objections to the draft advice moving forward. No objections were made.

Agency and Regulator Responses

Kyle Rankin, DOE-RL and Co-Deputy Designated Federal Officer for the HAB, complimented the members for the effort put into the advice. Kyle stated that he will take the advice back to DOE-RL and develop a response soon.

John Price, Ecology, conveyed his appreciation for the HAB and all they do for the agencies. John touched based on an earlier comment made by Tom Fletcher regarding the 4 billion-dollar request not being plausible. In 2015 and 2016, Ecology and EPA negotiated some changes to the Central Plateau milestones that moved some of the milestone completion dates out by 25 years. Those milestones were based on a budget of 1.2 billion-dollars per year for DOE-RL. If DOE-RL does not receive the 1.2 billion-dollars per year starting in 2023 and maintain that amount, the milestones will actually be pushed further

out. As Alex Smith stated earlier, DOE-ORP requires 2 billion-dollars of flat funding a year. At some point they will need 3 billion-dollars a year for 5 years or they will be unable to meet their consent decree and TPA commitments. Ultimately, if there is no DOE budget for Hanford of 4 billion-dollars a year for 5 years, Hanford cleanup will not finish or it will be done to a lesser degree. Ecology realized in 2008 that if DOE-HQ did not increase funding for the DOE-ORP mission, the tank waste mission would not finish, which is still true today. In 1997 the TPA Agreement was amended so there would be an annual budget meeting. Most recently at these meetings, DOE-ORP has not provided a lot of information, therefore it would be difficult for the HAB to weigh in on priorities with little information provided on proposed work.

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

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

C: “Ken Niles, co-author of draft advice was not able to be here in person, but gave instructions to bring forward for items that are no longer relevant in the advice. Ken stated that he felt paragraphs 5 & 7 on page two are no longer valid for this advice. On page three, paragraph 10 should be removed. Advice bullet points 2 and 4 are essentially worded the same. We should remove advice bullet point 4.”

C: “We need to slow down and thoroughly review these advice points before removing them. I have a concern that advice bullet points 2 and 4 are not the same and should not be removed.”

R: “We are going to review paragraph by paragraph through the advice. We will leave the bullet point in for now.”

C: “My suggestion since we have not had any activity for 4 months, is to send this advice back to the committees for further review and cleanup of the changes.”

R: “I don’t agree with your suggestion, as we are not meeting again until March 2018. The advice would be moot.”

C: “I have no objection to this advice moving forward, although I think the last advice point should not be in the advice as the budget is based solely on cleanup. This bullet talks about regulatory and community support, yet the advice is about cleanup. It does not belong in this advice.”

C: “I agree that the last bullet point should be removed and put into a letter separate from the advice.”

Q: “Why does it say that only one tank is leaking? Is this true?”

R: “At this time, there is only one known, but there is an analysis being done on others for potential leaks.”

C: “It appears that justification for the funding is in the background of the advice.”

C: “At the EM SSAB meeting in May, they stated that the Hanford budget includes mortgage. This is not good for the fact that half of the cleanup budget goes to mortgage costs.”

Following the incorporation of agreed upon revisions and minor wording changes, the Board approved the advice. Members agreed to send the final advice to the DOE-RL/ORP managers.

Draft Advice: 2018 In Person Regional State of the Hanford Site Meetings

Liz Mattson, Public Involvement and Communications Committee (PIC) Chair and Lead Issue Manager introduced draft advice on the State of the Site Meetings.

Ms. Mattson presented the draft advice during the November 2017 PIC meeting. Members of the PIC had an opportunity to provide comments on the draft advice.

Ms. Mattson stated that there have been eight pieces of advice regarding the State of the Site Meetings, previously. State of the Site meetings provide the general public an opportunity to weigh in and provide input to local decision makers. State of the Site meetings are considered regional meetings. These meetings are typically held in Portland, Seattle, and Hood River. The last State of the Site meeting was held in 2014. The advice asks for agencies to hold State of the Site meetings in the Spring of 2018.

Susan asked if any HAB members had any objections to the draft advice moving forward. No objections were made.

Agency and Regulator Responses

Kyle Rankin, DOE-RL and Co-Deputy Designated Federal Officer for the HAB, complimented the members for the effort put into the advice and being able to continue from where the HAB left off back in June 2017. Kyle stated that he will take the advice back to DOE-RL.

Randy Bradbury, Ecology, stated that Ecology is in favor of the State of the Site and will be supportive. Hanford Live was a worthy experiment and did demonstrate valuable paths moving forward.

Laura Buelow, EPA, stated that EPA is in support of the State of the Site meetings and committed to having management available.

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

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

C: “As I read bullet point 1, I am questioning the verbiage of in-person meetings could mean online so I think that should say regional public meetings.”

R: “*In conversations before the distinction was made that in-person is better than webinar.*”

C: “I am assuming that the facilitation team will going through the document and define the acronym for HAB as Hanford Advisory Board and then abbreviating throughout the advice.”

Following the incorporation of agreed upon revisions and minor wording changes, the Board approved the advice. Members agreed to send the final advice to local TPA agency managers.

Technologies Discussion

Bob Suyama, Benton County and Information Technology Subcommittee Chair provided the Board with a presentation on recent IT subcommittee efforts. Highlights from Bob's presentation included the following:

- The purpose of the IT subcommittee is to identify and recommend methodologies where innovations in information technology might improve Board communications, document reference and develop processes.
- Working with the facilitation team, Bob put together an online survey requesting further information and clarification into what the needs are for the HAB members. Bob stated that out of 60 HAB members, 40 survey responses were received. Only 1 of the 40 responders did not feel comfortable using a computer. 75% of the responders stated that the current Go-To Meeting and audio conferencing system is satisfactory. 75% of the responders would like to see an expanded committee call format for meetings impacted by inclement weather.
- It was determined that most of the information the responders would like access to is readily available on the HAB website at <http://www.hanford.gov/page.cfm/hab>. Bob noted that sensitive personal member information, such as phone numbers and email addresses are to be maintained by the facilitation team. This sensitive information will not be distributed electronically or posted on the web. All draft committee work and issue manager documents will continue to be distributed through email communications.

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

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

Q: "Have you looked into Dropbox for document storage and access?"

R: "No. It's a potential idea that we would have to look into."

C: "If any of the members have suggestions for software or programs that can be used for documents."

C: "One suggestion is the program SLACK. It is easy and members would be able to edit a document in real time."

C: "We should be considering the scheduling and logistics for the meeting when it is cancelled."

HAB FY18 Work Plan and Calendar

Susan Leckband, Board Chair provided an overview of the proposed FY2018 HAB work plan and the proposed FY2018 HAB calendar.

Members took the time to review the proposed work plan and calendar and ask questions.

The proposed FY2018 HAB calendar was approved by consensus with no changes made.

The proposed FY2018 HAB workplan was approved by consensus following the addition of the topic “RL/ORP Field Office Merger” to the holding bin.

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

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

C: “We should add code of record under item 9 and disposition of AY-102 under item 8.

C: “We need to find a place to address regulatory reform at headquarters. We should have a briefing on this at a full board meeting as it applies to all committees.”

C: “Regulatory reform could be added to item 18 RCRA permitting.”

C: “We should be discussing the priorities for Hanford in order to give advice.”

HAB Committee Reports

Board and Committee Leadership provided reports on ongoing efforts and anticipated work and products.

Tank Waste

Bob Suyama, Tank Waste (TWC) Chair gave an update regarding the Tank Waste Committee.

The Tank Waste committee met on August 9, 2017. Bob noted that Steve Wiegman, TWC Vice Chair led the meeting in his absence. This meeting included an update on WTP progress, LAWPS, C-105 retrieval efforts, AY-102 video inspection, EM SSAB Request/Budget Advice Review, and committee business.

On November 15, 2017 at 11:00 a.m. the Tank Waste committee is holding a committee call to plan for the December meeting.

River & Plateau

Dale Engstrom, River & Plateau (RAP) Chair provided HAB members an update regarding the RAP committee.

On August 8, 2017, the River & Plateau committee in joint with the Health, Safety & Environmental Protection committee met at the Richland Public Library. This meeting included a discussion on the CERCLA Five-Year Review and an update on PUREX and PFP.

Dale requested that the River & Plateau committee hold a call on November 14, 2017 at 1:30 p.m. to plan for a December meeting.

Health, Safety & Environmental Protection

Rebecca Holland, Health, Safety & Environmental Protection (HSEP) Chair communicated that the HSEP committee met on August 8, 2017 in joint meeting with the RAP committee. This meeting included a discussion on the EM SSAB request/budget advice, a safety culture round table, transportation infrastructure, and committee business.

The HSEP committee plans to join the TWC and RAP calls to determine if a meeting will be held in December.

Public Involvement & Communications

Liz Mattson, Public Involvement & Communications (PIC) Chair reminded members that each member and alternate formally gets to pick two committees to join. PIC is a freebie and everyone can take part in.

The PIC had a very involved committee meeting on Tuesday, November 7, 2017 at the Richland Public Library. Primary topic of discussion at the meeting was the State of the Site meetings, which included recommendations of locations, topics, and outreach.

Members also shared their self-assessments on how they communicated about Hanford to the friends, family and community.

The PIC will hold a December committee call on December 13, 2017 at 9:00 a.m. to determine if a meeting will be held in January.

Budget and Contracts

Jerry Peltier, Budget and Contracts Committee Chair and Gary Karnofsky, BCC Vice Chair were not in attendance. No update was provided.

In previous communication, both Mr. Peltier and Mr. Karnofsky determined no call is needed for November 2017.

Executive Issues

Susan Leckband, Board Chair gave an overview of the Executive Issues Committee (EIC). A summary of calls for November/December 2017 was provided.

The EIC will hold a December committee call on December 13, 2017 at 1:30 p.m.

National Liaison

Pam Larsen, National Liaison provided Board members an update to include the following:

EM SSAB

Stacy Charbonneau's comments to SSAB Chairs – October 18, 2017

- DOE has been working with EPA and ECOS (state regulators) to examine opportunities to streamline regulatory processes.
- There is a need for a national roadmap to integrate priorities across sites
- The new Administration is fully supportive of the EM program
- She commented on the Hanford budget of \$2.2 to 2.5B while \$4B is needed to meet TPA requirements
- As they examine long-lived missions, how can work get done faster and cheaper?
- Failing infrastructure is a problem across all of the sites

- DOE-EM has been to slow to make decisions and that has slowed down cleanup

Los Alamos – Treatment of the 60 drums of waste containing an organic absorbent, like the drum that breach in the WIPP facility, began in May 2017. Waste was removed from the drums and mixed with water and zeolite, an inert material, to render the waste non-radioactive. This was done in a climate controlled steel enclosure that had a refrigeration unit to keep the drums cool. It took over 5 months to treat the drums. The material has been repackaged and the drums will be certified before shipment to WOPP.

Idaho – DOE approved the use of 50,000 – pound casks for transporting fissile materials and cobalt-60 waste offsite. The new casks allow for higher authorized fissile amounts and higher radioactivity due to more lead shielding.

The SSAB would like to study an ongoing mission for the Advanced Mixed Waste Project in other words treat material for other sites.

Waste Isolation Pilot Plant – November 4th marked the 100th shipment to arrive at WIPP since TRU waste shipments to the facility resumed in April. Sites that have shipped this year include Idaho, Oak Ridge and Savannah river as well as Waste Control Specialists in Texas.

A new ventilation system is essential. They are working to expand above ground storage just to better manage waste placement during bad weather.

Savannah River Site – SRS has developed a Remote Field Worker Application to maintain communication and monitor the location of employees taking samples or doing other work in remote areas across the 310 square-mile site. This will be used by the Forest Service when they are doing controlled burns on the site or when they schedule deer hunts.

Nevada – Reported at SSAB Chairs meeting that the Board advise garners 85%+ acceptance & incorporation into EM programs & projects

Paducah – A new company began work under the Paducah Deactivation and Remediation contract at the Gaseous Diffusion Plant on October 20th. The contract is valued at approx. \$1.5 B over 5 years with options to extend up to 10 years. They will manage more than 650 structures to minimize maintenance costs, risk and future demolition. The site is located in western Kentucky on 3,500 acres, 10 miles west of Paducah, 3.5 miles south of the Ohio River. They processed uranium from 1952 to 2013 for military reactors and nuclear weapons and later commercial fuel.

Board Business

Scheduling of Upcoming Committee Meetings/Phone Calls

Committee members provided input on required committee phone calls for December. All committee meetings were scheduled.

Potential Products for March Meeting

The following preliminary topics were discussed:

- 45-Day Review results
- Emergency Preparedness

- PUREX Tunnel 2
- Milestone issue with System Plan 8
- TPA changes
- Advice for briefing emergency response to take covers
- 100 BC RI/FS Proposed Plan (potential advice)
- Code of Record (potential advice)

Committee of the Whole Topics

Members discussed potential topics for an April 2018 Committee of the Whole (COTW) meeting.

Topics of discussion:

- DFLAW (spring recommendation) System Plan, permitting process, tank integrity, aging infrastructure, public tutorial in evening, PIC work with the Department to get notice out to public.
- System Plan 8 (Issue manager topic)
- Tank Waste Treatment and Integrity
- Infrastructure
- PUREX Tunnel 2

Closing Remarks:

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

Attachments

Attachment 1: Agency Update (DOE-RL Presentation)

Attachment 2: Agency Update (ORP Presentation)

Attachment 3: Agency Update (Ecology Presentation)

Attachment 4: HAB Information Technology Sub-Committee Presentation

Attachment 5: HAB FY2018 Work Plan

Attachment 6: HAB FY2018 Calendar

Attachment 7: Draft Advice: Hanford Site Budget

Attachment 8: Draft Advice: 2018 In Person Regional State of the Hanford Site Meetings

Attendees

Board Members and Alternates:

| | | |
|----------------------------|-------------------------|---------------------------|
| Stephen Metzger, Alternate | Pam Larsen, Member | Richard Bloom, Alternate |
| Robert Davis, Member | Bob Suyama, Member | Larry Lockrem, Alternate |
| Gary Garnant, Member | Bob Legard, Member | Phil Lemley, Alternate |
| Liz Mattson, Member | Gene Van Liew, Member | Shelley Cimon, Member |
| Susan Leckband, Member | Amoret Bunn, Alternate | Helen Wheatley, Alternate |
| Shannon Cram, Member | Emmett Jackson, Member | Dan Serres, Alternate |
| Alex Klementiev, Member | Paige Knight, Member | Antone Brooks, Member |
| Dan Solitz, Alternate | Dale Engstrom, Member | Jan Catrell, Member |
| Ed Pacheco, Alternate | Steve Wiegman, Alernate | Rudy Mendoza, Alternate |
| Sam Dechter, Member | Tom Galioto, Member | Gary Busselman, Alternate |
| Emmett Moore, Alternate | Richard Jaquish, Member | Jean Vanni, Alternate |
| Kristie Baptiste, Member | Earl Fordham, Member | Mike Priddy, Alternate |
| Rebecca Holland, Member | Jack Bell, Alternate | Margery Swint, Alternate |
| Ken Niles, Member | | |

Agency, Contractor & Support Staff:

| | | |
|-------------------------|--------------------------|--------------------|
| Mark Heeter, RL | Kyle Rankin, RL | Tom Fletcher, RL |
| Dieter Bohrmann, ORP | Dawn MacDonald, ORP | Jon Peschong, ORP |
| Echo Dahl, ORP | Alex Smith, Ecology | John Price Ecology |
| Ginger Wireman, Ecology | Randy Bradbury, Ecology | Laura Buelow, EPA |
| Jennifer Colborn, MSA | Ty Blackford, CHPRC | Kelsey Shank, HII |
| Dana C. Gribble, MSA | Jennifer Copeland, CHPRC | |

Members of the Public:

| | | |
|-----------------------------|--------------|--------------------------|
| Mark Tomassoni | Edwin Watt | Jeff Burright |
| Sherri Schatz, ProSidian | Brian Math | Melissa Orona, ProSidian |
| Lindsay Strasser, ProSidian | Annette Cary | Jim Alzheimer |