

FINAL MEETING SUMMARY

HANFORD ADVISORY BOARD

September 4-5, 2014

Pasco, WA

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This is only a summary of issues and actions presented at this meeting. It may not represent the fullness of ideas discussed or opinions given, and 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 (HAB or Board) action

The Board adopted one piece of advice regarding the 100 F Remedial Investigation/Feasibility Study and Proposed Plan.

Board business

The Board will hold committee meetings in October. The Board also confirmed the Interim Three-month Work Plan and Fiscal Year 2015 Board Calendar, as well as identified preliminary November meeting topics and opened nominations for Board chair and vice-chair and national liaison.

Presentations and updates

The Board heard presentations on:

- CRESP Hanford Site-wide Risk Review Project
- Tri-Party Agreement agency program updates

Public comment

No public comment was provided.

HANFORD ADVISORY BOARD

September 4-5, 2014 Pasco, WA

Steve Hudson, Hanford Watch and Board Chair, called the meeting of the Hanford Advisory Board (HAB or Board) to order. The meeting was open to the public and offered opportunity for public comment.

The Board meeting was audio-recorded.

Welcome, Introductions, and Announcements

Steve welcomed everyone to the meeting, noting the many new Board members in attendance today. Steve welcomed new Board members and said more formal introductions will be made during the November meeting, as well formal farewells to retirees.

Kris Skopeck, U.S. Department of Energy – Richland Operations Office (DOE-RL), noted that the Board is meeting in accordance with the Federal Advisory Committee Act (FACA).

Cathy McCague, EnviroIssues Facilitator, reviewed the meeting agenda and objectives, asking Board members to review the new ground rules posted in the meeting room.

Steve advised Board members to review the Fiscal Year (FY) 2015 Board calendar in advance of the Friday agenda item in order to identify any errors before finalization.

Steve confirmed adoption of the June meeting summary.

Susan Leckband, Washington League of Women Voters (Regional Environmental/Citizen), said the Board's 20th Anniversary Celebration has been moved to November to accommodate the schedules of Tri-Party Agreement (TPA) agency senior management. She asked Board members to help celebrate the incredible work of the last 20 years and contact Tammie or herself if they would like to help plan the festivities or make suggestions.

Susan welcomed Liz Mattson's daughter, Mazey, to her first Board meeting, noting her support in reducing the average age of meeting attendees.

Tri-Party Agreement Agencies – Program Updates

U.S. Department of Energy – Office of River Protection (DOE-ORP)

JD Dowell, DOE-ORP, provided a presentation on the recent accomplishments at DOE-ORP. His presentation is provided as Attachment 1. In addition to the information contained in the presentation slides, JD said:

- The River Corridor is 220 square miles along the Columbia River and the Central Plateau is 76 square miles; 65 miles in the Outer Area, 11 in the Inner Area. DOE's long term mission is the Inner Area, which will be under federal regulation as long as there is risk to humans and the environment.

- There are 177 total tanks broken into 12 Single-shell Tank (SST) farms and six Double-shell Tank (DST) farms. C Farm is in active retrieval status with a TPA milestone for complete retrieval in September. The 16 C Farm tanks contained between 600,000 to one million gallons of waste in the large tanks.
 - C-101 has completed final retrieval.
 - C-112 is under review for closure and being assessed for whether what is left in the tank is an acceptable risk; DOE believes a third technology will not reduce the remaining waste.
 - C-102 is slated for completion in November 2014.
 - C-105 retrieval is moving slowly using the Mobile Arm Retrieval System Vacuum.
 - C-111 retrieval is delayed due to a hydraulic leak; 35,000 gallons remain to be retrieved and DOE is working to recover the retrieval schedule.
 - C-107 has less than five percent of waste remaining after DOE attempted three technologies for retrieval; DOE is taking samples and working toward closure.
 - C-102 is two-thirds complete as of August 2014.
- A Farm and AX Farm are being prepared for the next active retrieval by validating equipment already on site, ordering new equipment, examining the tank pits, and preparing for overall operations. DOE will be working at A/AX for the next few years.
- 242A Evaporator is going through a system upgrade to support retrieval and consolidation activities. Start up will occur on Friday, September 5 after six to nine months of readiness activities have been completed. The facility reduces the liquid volume from SSTs as it moves into DSTs. Restarting the Evaporator has a high probability of producing vapors; special precautions are being taken to protect workers as startup commences.
- The leak in AY-102 is currently being prevented from leaking into the surrounding environment. Changes in tank temperature, as well as other factors including visuals, are being monitored on a weekly basis. The estimated leak is 30 ounces per week from two areas.
- The recent tank vapor exposures on site affected 41 workers, all of whom have been evaluated by local medical providers and released to continue work. JD noted some exposures were attributed to weed spraying, and there will be no long-lasting health effects. Workers in Tank Farms are now required to wear at least a half-mask and can ask for additional personal protective equipment at any time. If there is a bad smell, the area is locked down through Air Operating Procedure (AOP) 15 for sampling immediately. If more than a 10 percent Occupational Exposure Limit (OEL) is detected, work will close in the exposed area. No levels over the OEL have been detected, and DOE will continue to be conservative in their response to protect employees in the

short and long term. A draft report from an independent review team, to be released in December, will help DOE understand how to move forward to make improvements.

- The green roofs being added to buildings in the Waste Treatment and Immobilization Plant (WTP) complex, as highlighted in the presentation, means they are 80 percent complete. The Analytical Lab will be completed in the next few months, and the Low Activity Waste (LAW) Facility is 81 percent complete. The Pretreatment (PT) and High Level Waste (HLW) Facilities are being reviewed for technical issues before moving forward.
- Full-scale vessel testing for the PT Facility commenced July 25 to look at pulse jet mixer issues. The first phase focused on ensuring the mixers are effectively mobilizing and suspending waste. The next two phases will be a demonstration of actual vessel size testing in WTP.
- The LAW Pretreatment System (LAWPS) is currently being analyzed as a facility to precondition and pre-filter material from the LAW tanks for direct feed into the LAW Facility. LAWPS would not separate waste streams and would not go through the PT Facility. The project is at Critical Decision zero and is considered to be a low-risk, fixed cost project. Funding is in place for FY2015 and expected to be funded in FY2016, potentially costing around \$300 to \$400 million dollars. DOE will provide updates to the Tank Waste Committee (TWC) on the facility moving forward.
- The Consent Decree issues, leaking in AY-102, balancing LAW, and issues with tank vapors are priority issues for DOE and DOE-ORP will address them further during the November Board meeting.

U.S. Department of Energy – Richland Operations Office (DOE-RL)

Jon Peschong, DOE-RL, provided a presentation on the recent accomplishments at DOE-RL. His presentation is provided as Attachment 2. In addition to the information contained in the presentation slides, Jon said:

- Remaining cleanup at DOE-RL will cost \$50 billion dollars over the next 50 years. \$500 million per year is required to maintain safety and compliance. Jon explained the organization of how funding is appropriated and spent at DOE-RL.
- The Plutonium Finishing Plant (PFP) is the highest hazard facility on site, and DOE is working toward its safety within the next couple of years. Progress at PFP includes the removal of equipment from the building over the next year-and-a-half, followed by demolition in two years.
- DOE-RL treated 1.8 billion gallons of groundwater in FY2014, adding the capability to pump 2,000 gallons per minute at the 200 West Pump and Treat through American Reinvestment and Recovery Act funding. The Pump and Treat systems will continue to operate for 10 to 30 years until appropriate standards are met.
- An annex will be built to contain the radioactive sludge containers from K Basin, to be stored on the Central Plateau until treatment options are developed.

Washington State Department of Ecology (Ecology)

John Price, Ecology, provided a presentation on the recent accomplishments at Ecology. His presentation is provided as Attachment 3. In addition to the information contained in the presentation slides, John said:

- The TPA Public Involvement Calendar has been updated and posted to Ecology's website; copies are available at the back of the room.
- Ecology issued an order in March for DOE to pump AY-102 beginning September 1, which has not occurred yet. The two agencies are working toward a settlement on moving forward.
- In 2005, Ecology realized DOE was not complying with WTP milestones and tank retrieval milestones. In 2008, Ecology filed a Notice of Intent to sue DOE, and a settlement was reached in 2010. Ecology has since been notified that the milestones are still not being met, and the agencies are engaging in a dispute process to reach a settlement agreement.
- Ecology issues the Dangerous Mixed Waste Permit and the AOP, as well as other, smaller permits. Ecology conducts public involvement whenever DOE requests modifications to the permits.
- The Richland Library is hosting an interesting Hanford exhibit through the end of September, developed by Ecology and the Washington Department of Health. John encouraged the Board to visit.
- John showed an Ecology video developed to discuss wildlife at Hanford.

U.S. Environmental Protection Agency (EPA)

Emy Laija, EPA, said EPA does not have anything to present to the Board today but will be available for questions and comments.

Board questions and response

Note: This section reflects individual questions, comments, and responses, as well as a synthesis where there were similar questions or comments.

Q. How does the three technology approach to tank waste removal work, and what happens if they do not work?

R. (DOE) When feasible, three technologies are used to retrieve 99 percent of tank waste, which is DOE's goal. If it appears that a third technology will not improve upon the previous two, DOE works with Ecology to agree whether to move forward with the third based on the risk of what remains in the tanks. Multiple technologies are available, and the process has been conducted for several tanks in C Farm. If a third technology is used and does not retrieve additional waste, DOE and Ecology assess the risk of the remaining material and determine retrieval complete. DOE does not want to deploy a third technology if it means spending 90 percent of the funding on 10 percent of the waste. If there is remaining risk to human health or the environment, retrieval

will not be complete. An additional analysis of the aggregate remaining waste at C Farm will be conducted before the area is closed.

Q. What monitoring precautions are being used for startup at 242-A Evaporator? Are there any new technologies for sampling vapors?

R. (DOE) The systems are similar for AOP 15, including a personal monitor with an active pumping system. After startup is complete DOE will sample the air to determine if there is less than 10 percent OEL and restrictions can be reduced. The sampling and monitoring experts can come back to the Board with further details.

Q. Will closure of the Waste Sampling Characterization Facility occur in September?

R. (DOE) There is not currently a disposition plan for closing the facility; it is still useful to the contractors.

Q. Can DOE speak to the future of the HLW Facility and its technical issues?

R. (DOE) DOE started a return to the design and procurement process for the HLW and PT Facilities on August 17. That does not mean a return to construction. Resolution of the issues with the pulse jet mixers could put the facilities back on track in FY2015. The HLW Facility is the first priority, then the PT Facility. Returning to the design now helps get the facilities back on track to construction.

Q. Will tank retrieval technology deliberations between DOE and Ecology be documented for the public in advance of a decision?

R. (DOE) The process will be documented through formal correspondence, but made available after the decision. The agencies can provide an informational briefing on why and how decisions were made.

Q. What are the impacts of transferring the nuclear reactors to long-term stewardship (LTS) to the final disposition? Presumably the reactors will need to be dismantled in 60 to 70 years, and then what?

R. (DOE) The reactors will be monitored regularly and maintained in proper condition. DOE has decided to wait 75 years to decide whether to dismantle after having already removed the waste.

Q. What is the status on the 618-10 and 11 Burial Grounds?

R. (DOE) DOE is continuing remediation of 618-10, using deployed technology to remove waste from the vertical pipe units (VPUs) before removing the VPUs as a whole. An auger system has been tested for deployment and is being evaluated for moving forward. The 618-11 burial ground is similar to 618-10 but features a caisson, a large concrete box underground, that is next to the Energy Northwest parking lot. Proximity to the facility make retrieval complicated and holds the federal government liable. DOE is working on licensing amendments for 618-11 but are not moving forward with remediation at this time.

Q. Where will waste from the K-Basin be stored? Will it be stored the same as N Reactor fuel?

R. (DOE) The waste will be moved to the Central Plateau Treatment Plant in slurry form. Depending on the appropriate technology for treating the waste after it has been stored, it may be shipped to the Waste Isolation Pilot Plant (WIPP).

Q. What is the projected start-up date for the LAW Facility?

R. (DOE) The LAW Facility will start-up the same time as the rest of the WTP complex, proposed for December 2022.

Q. Can DOE provide information on the cleanup contract for the 324 Building?

R. (DOE) Washington Closure Hanford is responsible for the contract. They issued a request for proposals and selected Areva, an international firm, who will be joined by a local small business as well. There is a path forward on the mock up of the facility with a cold test to recreate the conditions in the cell. The design for the equipment to go through the floor of the building is also moving forward. DOE will update the Board when the designs are ready.

Q. Concerning the LAW Pretreatment Facility and the tanks it will be treating – are those tanks not all HLW?

R. (DOE) Waste is either classified as HLW or LAW as it comes out of the tanks, based on its atomic number, source, and activity. The PT Facility separates those streams and distributes them to different facilities. One tank can host both HLW and LAW, and direct feed LAW must be separated to go to the LAW Facility. DOE will process LAW as soon as the facility is ready.

Q. Is there an overall wildlife management plan at Hanford? If there is not, there should be.

R. (DOE) DOE will find out and get back to you.

C. DOE spoke to goals met for the groundwater Pump and Treat systems, but did not address goals yet to be met. The public should know what those goals are.

R. (DOE) The goals are included in Records of Decision (RODs) DOE is not currently engaged in. We can provide an update at the next Board meeting.

Q. What happens if the pulse jet mixers currently being tested for WTP do not work? Are there contingency technologies?

R. (DOE) The design basis for the mixing technology is proven to work; at this point, it is a question of configuration. DOE needs to ensure we can work around having to scale from larger to smaller, because that does not work. DOE is conducting a full-scale test to determine if the pumping controls work, and the process will get more complex from there. For the black cell, there is no back up technology.

Q. DOE uses the term “disposal” incorrectly, because to dispose of waste means it still exists; it is not complete retrieval and treatment for tanks with waste to remain onsite. How many tanks remain onsite that still have waste, yet DOE is calling them “complete?”

R. (DOE) The requirement to be able to call a tank retrieval “complete” is 99 percent removed. The constituents tank to tank are not the same, so one percent remaining in one tank might provide different risk than the one percent in another tank. DOE is committed to ensuring what is left in the tanks does not affect human health and the environment.

Q. If DOE believes PFP to be the largest risk on site, what does the agency think about the Waste Encapsulation and Storage Facility (WESF) and its potential for future disaster from earthquakes? WESF still contains large amounts of waste and has a great potential for risk.

R. (DOE) PFP is the highest hazard at Hanford based on safety basis and potential hazard scenarios based on when PFP is at complete inventory. The difference between PFP and WESF is that the waste at WESF is securely stored, whereas the waste at PFP still causes great risk. A critical step for PFP will be to remove waste capsules stored under the water into heat-safe containers.

Q. Will the Budgets and Contracts Committee (BCC) be included in contract work for the pre-LAW Facility? Fixed-price contracts for this type of work, when it is for a low-maturity technology, are rarely a good choice.

R. (DOE) DOE will brief BCC. The fixed-price contract is appropriate in this case because the technology is low risk; only the configuration creates risk. This project is a priority for DOE-Headquarters as part of an initiative across the DOE-Environmental Management (EM) complex.

Board and Committee Reports

Budgets and Contracts Committee (BCC)

Jerry Peltier, City of West Richland (Local Government), said BCC did not meet this summer but will be ready to provide budget advice in FY2015. BCC recommends not providing advice on the 2015 Lifecycle, Scope, Cost, and Schedule Report (Lifecycle Report) as there has not been a change to the baseline schedule, so the Lifecycle Report should have no significant changes.

Health, Safety, and Environmental Protection Committee (HSEP)

Richard Bloom, Grant and Franklin Counties (Local Government), acknowledged members of HSEP, noting their recent work focusing on safety culture and tank vapor issues on site. HSEP also examines nuclear safety issues and permitting, and recently participated in a webinar on the AOP with the Washington Department of Health and Ecology. Richard suggested the HSEP presentation on RAD Primer be brought before the full Board, as it is very informational and beneficial.

Public Involvement and Communications Committee (PIC)

Liz Mattson, Hanford Challenge (Regional Environmental/Citizen), acknowledged PIC members, noting everyone on the Board can be a part of PIC. Liz said in the PIC meeting held September 3, the TPA agencies clarified their intention for PIC to remain a committee after some initial confusion. The TPA Quarterly Update was held before the PIC meeting. PIC debriefed the State of the Site meetings, discussed the role of the PIC, and drafted a new advice point and background item for the 100 F Area Proposed Plan advice. Liz suggested the full Board participate in a PIC activity designed to identify outreach Board members are conducting outside of regular HAB meetings. No firm topics have been identified for the November PIC meeting, but the committee will have a call in October to discuss their work plan.

River and Plateau Committee (RAP)

Pam Larsen, City of Richland (Local Government), acknowledged RAP members and encouraged new Board members to participate. RAP addresses all Hanford cleanup outside of the Tank Farms. RAP will not have a meeting in September, but in October plan to address Central Plateau Cleanup Principles, receive an update on the 300 Area remediation efforts, and discuss focusing budget on infrastructure maintenance and upgrades on site. DOE-RL will brief RAP on the status of the Continuing Resolution and will hear a presentation on the 100 D/H Area Proposed Plan in October or November. Pam noted that October RAP meeting is scheduled for October 7 at the Richland Library.

Tank Waste Committee (TWC)

Bob Suyama, Public-at-Large, acknowledged committee members and noted they have been following leaking tanks, progress on emptying SSTs, the extent of the DSTs conditions, technical issues at WTP, and examining tank vapors in conjunction with HSEP. TWC toured the facility conducting the full-scale test of the pulse jet mixers and understand the issues. Bob noted the last TWC meeting was cancelled due to availability of agency staff to support it which enabled the Leadership Workshop to take its placeholder. They will have a meeting in October.

Executive Issues Committee (EIC)

Steve Hudson said the EIC is comprised of committee leadership. The EIC meets on a regular basis to address a range of concerns and serves as a clearinghouse for the obligations and responsibilities of the Board. The committee evaluates Board effectiveness, drafts calendars and work plans, and discusses how to involve the public in HAB meetings and events.

Site-specific Advisory Board (SSAB)

Steve said the SSAB is comprised of the chairs and vice-chairs of the seven SSAB sites in the DOE-EM complex who meet twice a year. The next meeting will be held in Idaho in late September, and the committee will receive updates on the DOE-EM program, waste management, the DOE-EM budget, and other topics of concern across the complex. Steve encouraged the Board to raise questions or concerns to him or Susan Leckband if members have issues they feel should be addressed nationally. Susan said the SSAB meetings provide a unique opportunity for the Boards to ensure DOE-HQ is listening to their primary concerns. The SSAB crafts advice on issues affecting all of the sites in order to bring those issues

to the highest level. Steve noted the SSAB also makes suggestions for activities that have been successful at other sites, including student participation in Board meetings, which the EIC is looking to do for the HAB.

Board discussion

Note: This section reflects individual questions, comments, and responses, as well as a synthesis where there were similar questions or comments.

- The Board discussed DOE's recent suggestion to reduce the number of HAB committees as a recommendation resulting from the DOE-RL Assessment Report presented at the Leadership Workshop in August. The EIC will be working to address where committee efficiencies can be made, but reducing the number of committees has not been made a requirement. The TPA agencies are concerned about being able to properly support the work of the committees, and the updated format for the Board work plan should help identify when support will and will not be available. One Board member noted that the DOE-RL Assessment Report did not address reducing the number of committees, emphasizing that the assessment was conducted by two retired DOE managers.
- After discussing recent meeting cancellations, the Board discussed whether or not they can meet without agency support or participation. Cathy noted that DOE must participate in the meetings if facilitation support is going to be provided, but that DOE participation does not have to mean subject experts; Kris Skopeck, the Board agency liaison, can attend to represent DOE. Committees can meet without DOE, EPA, and Ecology, but facilitation will not be provided and travel will not be reimbursed. Kris reiterated DOE's commitment to supporting the HAB, noting cancelled meetings due to lack of DOE availability is not intentional.
- The Board discussed the benefit of evening meetings, noting they have committed to providing one evening session in FY2015 to focus on an engaging topic that will increase public participation. The Board was previously polled on their opinions about evening meetings, the results of which were provided at the back of the room.
- One Board member encouraged members to sit in on committee calls and meetings even if they are not active members.

The Board conducted a round of introductions for new Board members.

Draft Advice: 100 – F/IU Area Proposed Plan

Introduction of advice

Dale Engstrom, Oregon DOE (State of Oregon), said the advice is the second Board advice on the 100 F Area Proposed Plan, the first of which hoped to influence the document before it became Rev. 0. The Board participated in a Sounding Board on the 100 F Area Proposed Plan in which every member and alternate were able to voice their opinions on the topic. Through the Sounding Board, it was apparent the Board is uncomfortable with the duration of Institutional Controls (ICs), which were described as 175 years in Draft A.

Dale reviewed the advice and provided reasoning behind the advice points. The Board is asking DOE to not replace Pump and Treat treatment success with balancing criteria, as treating specific sites will significantly reduce the need for ICs in the 264-year timeframe to 75 years.

Agency perspective

Jim Hansen, DOE-RL, said DOE will take the advice into consideration as part of the Responsiveness Summary for the Proposed Plan.

John Price, Ecology, indicated that advice point two could be made clearer with information brought from the background section.

Emy Laija, EPA, asked the Board to ensure they are not taking specific regulations out of context by specifically siting referenced regulations.

Board discussion

The following key points were noted during the Board discussion:

- The PIC suggested an additional bullet and background information to ask for more information to be included in the Proposed Plan on ICs, as well as encourage public comment on whether the projected duration of the ICs and exposure scenarios used is appropriate, as required by state and federal law. The suggested addition notes the Board's disappointment in the TPA agencies not providing adequate information on the 100 F Area Proposed Plan and proactively asks them to do better next time.
 - DOE explained the future land use scenarios used for developing the Proposed Plan as conservation in the near term and residential use in the future. EPA noted the agencies can work with PIC in the future on the level of information to provide in public outreach materials for upcoming Proposed Plans but that asking the public to comment on the reasonable maximum exposure scenario is confusing and not required. One Board member stressed the importance of providing adequate information so the public knows they can comment on the scenarios and assumptions used, whether or not the scenarios are accurate. The public needs to comment on whether not being able to use the site for irrigation for 200 years is reasonable.
 - The Board discussed reasonable maximum exposure scenarios and whether the proposed cleanup levels under the Proposed Plan will provide for future land use. One Board member asked how any other scenario than tribal use can be used when the local tribes have Treaty Rights on site. Emy said the tribal question is complicated and is part of an ongoing discussion in government to government consultation with the tribes. DOE said residential cleanup levels are being used to the 15-foot depth required by the State of Washington, and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) five-year review will evaluate the effectiveness of those levels. If cleanup does not continue to be effective, DOE will re-evaluate. CERCLA requires the agencies to consider industrial or residential cleanup levels.

- The Board determined that PIC's suggested addition to the advice warrants its own piece of advice from the Board as it has significant implications for public involvement. The background and advice point were rewritten to stress that the agencies did not identify to the public and solicit comment on the restriction of Hanford resources for hundreds of years into the future. The advice advises the agencies to take comment on whether it is reasonable that ICs may fail and resources will be restricted.
- One Board member suggested the Board host a presentation on the Treaty of 1855 to better understand tribal rights to the land and river on and around Hanford. He also noted that tribes must agree on the remaining risk at Hanford as they use more resources than what is considered in subsistence farming scenarios and are therefore subject to a higher level of risk.
- The Board discussed the consideration of cost as balancing criteria, noting that while it should not be the determining factor, cost should be considered when determining cleanup levels. Significant sums of money should not be spent to cleanup small amounts of remaining waste that does not pose risk.
- The Board added an advice bullet to ensure the effectiveness of Monitoring Natural Attenuation (MNA) during the CERCLA five-year review. Emy noted the MNA is reviewed as part of the Monitoring Plan, not included in the Remedial Investigation/Feasibility Study (RI/FS) and Proposed Plan. She said the agencies conduct the monitoring already.
- The Board discussed the agencies' evaluation of catastrophic events and their potential impacts on site. Emy said those events, including the potential for flooding, are analyzed as part of the RI/FS process and through monitoring. The Board reworked the additional advice point to better reflect their concern about catastrophic events and the use of ICs.

After minor changes, the advice was approved.

Presentation: CRESP Hanford Site-wide Risk Review Project

David Kosson, CRESP, thanked the Board for allowing him and Jennifer Salisbury to present today. His presentation is provided as Attachment 4. In addition to his presentation, David made the following key points:

- CRESP works through a cooperative agreement with DOE that includes funding; they provide clarity on technical issues and risk across the DOE-EM complex.
- The CRESP Draft Methodology Report will be posted for public comment later in the afternoon, and CRESP has been busy engaging the public in the Hanford community about the methodology and the public process. While the comment period may not provide enough time for the Board to submit advice, David encouraged the Board to comment individually and with their organizations. CRESP is open to making changes to their methodology if required.

- Additional opportunities for public comment include when the Interim Report is published in February 2015, and the Draft Report at the end of 2015. The Final Report is a CRESP product and independent of other agencies or organizations.
- CRESP looks at the 50 years of cleanup ahead and makes recommendations on what cleanup should be done, knowing not everything can be done immediately. CRESP analyzes risk to help DOE sequence projects for moving forward. Dave noted that while CRESP evaluated risk, risk management is not included in their input.
- Evaluating cultural risk is different than evaluating human health, so there are different methodologies for each evaluation criteria, or “receptor.” Risk ratings will be different for each receptor and will be ranked based on highest to lowest risk. The evaluations will include impacts from off-site facilities as well, such as WIPP. Supplemental information will be provided for items that fall outside of the CRESP scope but that they identify as important for additional consideration.
- The risk evaluation time frame is divided into Active Cleanup (50 years), Near-term Post Cleanup (out 100 years from the end of active cleanup), and Long-term Post Cleanup (100 to 1,000 years after cleanup).
- Industrial risk is included in the evaluation because infrastructure hazards are just as important as chemical hazards.
- Jennifer spoke to the ecological risk evaluation, noting that most risk for ecology is during active remediation and the 100 years after cleanup, tentatively between now and 2164. Some species are thriving at Hanford with an increased presence, such as the Blue Bunch Wheatgrass which has increased 161 percent.
- If legislation for the Manhattan Project National Historic Park and the six resources included specifically in the legislation is adopted, the park will be setup within one year and will affect the site and CRESP’s evaluation.
- CRESP will be working with the tribes throughout the evaluation process. Their information about resources and cultural resources on site will be extremely valuable for the evaluation process.

David reiterated his encouragement for Board member comments on the Draft Methodology Report and provided a handout on how and where to submit comments, which are needed by October 3, 2014.

Board questions and discussion

Note: This section reflects individual questions, comments, and responses, as well as a synthesis where there were similar questions or comments.

Q. Is CRESP confident that you have sufficient data on the nature and types of contaminants at Hanford?

R. There will never be perfect information, so CRESP works with what is available and makes assumptions based on that information. We strive to be very clear about the information gaps and

how assumptions are made. Identification of the gaps can support where to conduct waste characterization moving forward.

Q. How does CRESA define risk, and what is the risk range?

R. Risk is different for each receptor because of the difference in their nature. Risk is the combination of the likelihood that something may happen and the magnitude of what would happen. The likelihood could be low and the impact could be low, as well as high likelihood with high impact, or high likelihood and low impact, and vice-versa.

Q. How will CRESA's evaluation be used at Hanford?

R. The intent of the report will be to inform the agencies and the general public on sequencing for cleanup activities as well as identify what requires further characterization.

C. CRESA met with the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and did not address cultural resources at all. Please meet with the Cultural Resources Committee of the CTUIR.

R. Thank you for the invitation; CRESA welcomes further meetings with the CTUIR. Please provide your contact information at the end of the presentation.

Q. What is CRESA's definition of cultural resources? Tribal cultural resources include sacred sites, hunting grounds, food gathering, burial grounds, and others.

R. CRESA uses DOE's definition of cultural resources as found in the Historic and Cultural Resources Management Plan that is applicable to historic and prehistoric artifacts valuable to Native Americans and non-Natives.

Q. Why? is the Columbia River and water excluded from the evaluation?

R. Water and water resources are included in the free-streaming/ecology receptor, which includes the Columbia River and everything in it like fish, plants, and anything that lives in the sediments.

Q. Why are Treaty resources not considered?

R. CRESA welcomes further clarification on tribal and Treaty resources but is concerned about differentiation between physical aspects like view-sheds and into legal terminology which is not assessed for risk.

Q. CRESA does not consider sites that have already been cleaned up, but how can risk be determined and put into context with the rest of the land if you do not consider remaining risk after cleanup? Completed remediation still has risk.

R. Please submit your question/comment formally. Completed cleanups have been through a public process and regulatory determinations that are legally responsible for those activities. CRESA is charged with providing information on what should be done in the future, so past activities are not on our radar. CRESA is not in the position to inform DOE on what they have done in the past.

Q. How does the CRESA evaluation configure cultural and environmental resources to make a meaningful decision? It is adding two completely different components together.

R. Balancing amongst receptors and different types of risk is called value driven balance. It is important that within each receptor we understand what causes more risk to groundwater and human health. We can show you how we meld them together, but there is no one way and we only provide the tools for doing so.

C. Please do not misconstrue today's presentation as receiving input from the HAB and our stakeholders. There are organizations in the region that should be added to your consultation list as well.

R. Today's presentation is meant to provide you with information and ask that you provide input however you choose.

Q. How will CRESA issue a report on risk as a function of exposure if you have not yet asked stakeholders what the reasonable, foreseeable exposures are, especially for drinking water and groundwater? It appears you are relying exclusively on the Hanford Comprehensive Land Use Plan (CLUP), which was not supposed to serve as substitute for development of exposure scenarios.

R. CLUP is an important document, but it is not the only one. We have to be careful about how we handle scenarios and how we develop them. Please read through the Draft Methodology Report to see the different scenarios developed from different Hanford documents. Groundwater and drinking water are considered separate resources in regards to risk so we can provide a reasonable basis for drinking water based on the State of Washington's highest beneficial use standards. Separating the water helps us go above and beyond the required scenarios.

Q. In terms of fish, game, and aquatic species, is only what is found downstream of the 100 BC Reactors included?

R. I am not aware of the exact boundaries, but we do have an expert looking into it.

C. Please consider that upstream resources can affect those downstream. Samplings should be done as upstream as the Vernita Bridge.

Steve reminded the Board to submit individual comments on the Draft Methodology Report by October 3.

Public Comment

No public comments were provided.

Board Leadership and National Liaison Nomination Processes

Cathy reviewed the nomination process for Board Chair, Vice-chair, and National Liaison, noting all seats are open for nomination given the vacancy of the National Liaison seat and two-year term for Steve and Susan. Nominations will be open September 5 to October 15 and will be collected by a Nominating Committee before being distributed to the full Board in November. Cathy asked for volunteers for the Nominating Committee, noting Board members should contact EnviroIssues if they are interested.

Cathy noted that the Board directly appoints the Vice-chair, but the TPA agencies must review the Board's recommendation for Chair before making an appointment.

The Board discussed the need for the National Liaison position and agreed to review how the position can best serve the Board, noting that the position description was recently revised to describe what the National Liaison does and should do for the Board, including attending national meetings and raising national issues to the attention of the Board.

Board Business

Board Three-month Interim Work Plan

Susan said the Interim Work Plan is a draft of what the Board will finalize and adopt in November, even though the process is normally finalized in September. The new format for the Work Plan identified topics and context, timeframes in which they will need to be addressed, an agency lead or contact person, and potential action as well as which Board committee will take on the topic

Cathy noted the format was developed by the TPA agencies, and EnviroIssues worked to insert the Board's identified topics. The Work Plan continues to be iterative and adaptable should an emerging issue arise, and the TPA agencies have agreed to meet regularly with the EIC to discuss progress.

Board questions and discussion

Note: This section reflects individual questions, comments, and responses, as well as a synthesis where there were similar questions or comments.

- One Board member suggested adding a control number to each TPA agency topic and focus on the topics the agencies need help with, rather than adding numerous other Board topics. The EIC will look into adding control numbers. The Board discussed the flexibility of the Work Plan to include Board-identified topics when they agree they are necessary. EPA noted the agencies may not be able to support additional topics identified by the Board. The Board agreed to have further conversations about how the Board, the topics they address, and their advice can be effective for the agencies and effect change on site.
 - One Board member noted that TPA concurrence on identified topics is difficult, as even though DOE identifies safety as their priority, they have never asked for advice on safety; the Board has provided advice because they feel it is important. DOE said Safety Culture is a topic on the Work Plan, but policy level advice might not have been needed in the past because it does not directly inform work activities.
- The agencies requested that TPA topics be designated in the Work Plan, whether by color coding or always remaining at the top of the list in order to distinguish between TPA topics and Board topics. The Board agreed to list the agency topics first.
- The Board discussed frustrations with DOE being unable to support or present on topics the Board has been interested in recently. One member suggested that agency support from a subject expert is not necessary for all topics, especially if the committee just wants to discuss the topic, not hear a presentation on it. The Board and agencies will continue to discuss how to best support each other's work and schedules.

- The Work Plan holding bin has items that are both currently in a holding pattern as well as not yet addressed for immediate need by the agencies. They will continue to evaluate when the binned items should be addressed. Topics in the Work Plan might need additional information, which will be provided in full for the final Work Plan presented in November.
- The EIC will continue to work with the TPA agencies on the Work Plan, which will then be filtered down to the committees, who will fill out their individual committee work plans. Currently, the Work Plan only identifies TWC, RAP, and PIC as committees, but the EIC subgroup working on committee structure will inform whether to include HSEP and BCC as well.

After suggested changes were incorporated, the Board adopted the Three-month Interim Work Plan.

HAB Calendar

Steve said DOE-EM appreciated the Board's efforts to increase the effectiveness and diversity of the Board, as well as working to engage stakeholders and the public in more meaningful ways. In keeping with the commitment to strengthen public attendance, the FY2015 HAB Calendar reflects an evening meeting in April. PIC will look into topics that would attract the public during the evening.

Cathy reviewed the proposed calendar, noting the change of Board meetings on Thursdays and Fridays to Wednesdays and Thursdays to support DOE and its contractors moving to a four-day work week. Cathy said the recent HAB survey indicated Board members prefer mid-week meetings as well. The Effectiveness Plan has been incorporated into the calendar. In the future, at the request of DOE, the Board will try to provide a week between the various Board and committee meetings to allow the agencies to collect requested information and arrange for presenters.

Cathy noted that working around spring breaks in FY2015 will be difficult, and the June Board meeting was moved out a week to accommodate graduation schedules.

The Board discussed the difficult scheduling round the November and December holidays in 2014. One Board member suggested including projected public comment periods for RODs on the calendar and scheduling meetings to help the committees and Board prepare for them. Cathy noted the suggestion as an issue for follow up on for next year's calendar. Additional meetings can be added if the topic is urgent.

The Board adopted the FY2015 HAB Calendar.

Operational Issues

Steve said as a result of conversations at the Leadership Workshop, the EIC has formed subgroups to review the effectiveness of advice writing, committee structure, and Sounding Boards. A draft update to the Sounding Board process will need to be further revised before updating the HAB Process Manual. Steve noted that by request, the EIC will also be evaluating the effectiveness of their committee, as it has evolved over time. Steve said he would also like the EIC to consider adding local students to the Board to help ensure future membership.

Preliminary November Board meeting topics

Cathy reviewed tentative meeting topics for the November Board meeting.

- EMSSAB letter(s)
- TPA annual reports
- Committee annual reports
- Selection process for Board Chair, Vice-chair, and National Liaison
- Work plan update
- Advice (tentative)
- Treaty of 1855 - 101 presentation (potential evening presentation)
- 20th Anniversary Celebration

Closing Remarks

Emmett Moore, Washington State University (University), said he recently wrote to DOE concerning tank vapors and has received a response. EnviroIssues will distribute copies of the response to those who request it.

Cathy reminded the Board the nomination process for Board Chair, Vice-chair, and National Liaison are now open, as well the need to form a Nominating Committee.

The meeting was adjourned.

Attachments

Attachment 1: DOE-ORP agency update

Attachment 2: DOE-RL agency update

Attachment 3: Ecology agency update

Attachment 4: CRESP Presentation

Attendees

HAB Members and Alternates

Gabe Bohnee, Member	Maynard Plahuta, Member	John Martell, Alternate
Tony Brooks, Member	Gerry Pollet, Member	Edward Mausolf, Alternate
Janice Catrell, Member	Mecal Seppalainen, Member	Liz Mattson, Alternate
Lynn Davison, Member	Richard Stout, Member	Emmett Moore, Alternate
Derek Donley, Member	Bob Suyama, Member	Melanie Myers-Magnuson, Alternate
Gary Garnant, Member	Art Tackett, Member	Brad Peck, Alternate
Harold Heacock, Member	Gene Van Liew, Member	Mike Priddy, Alternate

Floyd Hodges, Member		Howard Putter, Alternate
John Howieson, Member	Mark Benjamin, Alternate	Ed Revell, Alternate
Steve Hudson, Member	Richard Bloom, Alternate	David Rowland, Alternate
Pam Larsen, Member	Shannon Cram, Alternate (phone)	Dan Serres, Alternate (phone)
Susan Leckband, Member	Dale Engstrom, Alternate	Rod Skeen, Alternate (phone)
Rudy Mendoza, Member	Barbara Harper, Alternate	Richard Smith, Alternate
Armand Minthorn, Member	Jeff Hunter, Alternate	Margery Swint, Alternate
Ken Niles, Member	Mike Korenko, Alternate	Jean Vanni, Alternate
Jerry Peltier, Member	Larry Lockrem, Alternate	Steve White, Alternate

AGENCY, CONTRACTOR, AND SUPPORT STAFF

Jon Peschong, DOE-RL	Gregory Jons, DOE	Mark Freshly, PNNL
Kristen Skopect, DOE-RL	Chris Kemp, DOE-ORP	Cathy McCague, EnviroIssues
Mark Heeter, DOE-RL	Alex Teimouri, DOE	Tammie Gilley, EnviroIssues
Karen Lutz, DOE-RL	Dennis Faulk, EPA	Melissa Thom, EnviroIssues
Jim Hansen, DOE-RL	Emy Laija, EPA	Sharon Braswell, Northwind/DOE-ORP
JD Dowell, DOE-ORP	Dieter Bohrman, Ecology	Mark McKenna, Northwind/DOE-RL
Carrie Meyer, DOE-ORP	Madeleine Brown, Ecology	Michelle Searls, Northwind/DOE-ORP
Steve Pfaff, DOE-ORP	Heather John, Ecology	
Reggie Eakins, DOE-ORP	John Price, Ecology	
	Ron Skinnerland, Ecology (phone)	

MEMBERS OF THE PUBLIC

Emily Bays, Hanford Challenge	David Kosson, CRESP	Jennifer Salisbury, CRESP
Annette Cary, Tri-City Herald	Alexander Nez (phone)	Chrissy Swartz, Heart of America Northwest
Peggy Maze Johnson, Heart of America Northwest	Andrew Pitman, HanfordLearning.org	