

**FINAL MEETING SUMMARY**

**HANFORD ADVISORY BOARD**

September 5-6, 2013

Kennewick, 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 two pieces of advice concerning:

- Leaking Tanks
- DOE-ORP Budget Requests

The Board also held a Sounding Board on the 300 Area Proposed Plan, Rev 0; and affirmed by consensus the 2014 HAB Work Plan and 2014 HAB Calendar.

**Board business**

The Board will hold one committee meeting (Tank Waste Committee) and five committee calls (River and Plateau; Health, Safety, and Environmental Protection; Budgets and Contracts; Tank Waste Committee; and Executive Issue Committee) in September. The Board also:

- Presented a report on FY2013 HAB Accomplishments
- Identified preliminary December Board meeting topics

**Presentations and updates:**

The Board heard and discussed presentation and updates on the following topic areas:

- Tri-Party Agreement Agencies – Annual Reports
- HAB committee reports
- 300 Area Proposed Plan, Rev. 0

**Public Comment**

No public comment was provided.

**HANFORD ADVISORY BOARD**  
*September 5-6, Kennewick, 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.

Steve noted a new Board member, Brad Peck from the Benton-Franklin Council of Governments, and re-introduced current HAB member Rosenda Shippentower from the confederated Tribes of the Umatilla Indian Reservation. Rosenda has attended a Board meeting in the past and hopes to become more involved and attend more meetings in the future. Also joining the Board as a new member alternate is Kristen McNall, representing the Oregon Hanford Cleanup Board.

Four seats were not represented: Benton-Franklin Public Health (Local/Regional Public Health), University of Washington (University), Nez Perce Tribe (Tribal Government), and Yakama Nation (Tribal Government).

The Board meeting was audio-recorded.

**Welcome, Introductions, and Announcements**

Jeff Frey, U.S. Department of Energy-Richland Operations Office (DOE-RL) and Deputy Designated Federal Official for the Board (DDFO), reminded Board members that the Board operates in accordance with the Federal Advisory Committee Act (FACA).

Steve announced that Becky Rubenstrunk has stepped down from the Board due to her move to Washington, D.C. Steve noted that the Public Involvement and Communications (PIC) committee will miss Becky.

Maynard Plahuta announced that the month of October celebrates the 70<sup>th</sup> anniversary of the start of construction at Hanford Site, which began in 1943. Washington State University-Tri-Cities is leading the recognition celebratory activities. There will be opportunities to tour T Plant and the F Reactor where animal research activities took place during the early history of Hanford Site. A series of four lectures will be offered in addition to other events. Passes are available for the entire celebration or in the form of a lecture or day pass on the Hanford History Partners website. Maynard also noted that Colonel Mathias' family toured the B reactor facility in August, and the family was appreciative to have the opportunity to tour the site for the first time to see what their father and uncle had accomplished between 1943 and 1945.

Steve noted that in June the Board discussed the draft Guidelines for Public Comment at Hanford Advisory Board Meetings, the purpose of which is to provide members of the public who wish to provide comment a process for how to do so. During the June Board discussion, members were invited to provide revisions and recommendations to improve these guidelines. Since incorporation of these revisions, there has been an additional update to allow agency representatives who wish to provide response to comments the opportunity to do so should they feel it appropriate at the meeting. This option might allow the member of the public a chance to hear a reply directly after asking the question, so as not to be met with silence after providing comment. Steve noted that these guidelines will be implemented and revised as needed based on lessons learned.

**Tri-Party Agreement Agencies—Annual Reports**

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

Matt McCormick, DOE-RL, provided an update on annual activities and accomplishments for DOE-RL; his presentation is provided as Attachment 1. In addition to the information contained in his presentation slides, Matt emphasized the following in his remarks:

- Developed in 2007-2008, DOE-RL's 2015 Vision maps Hanford cleanup progress, as overseen by the Tri-Party Agencies (TPA) Agreement. The TPA Agreement implements closure statutes and provides cleanup schedules and processes to hold DOE accountable for cleanup.
- DOE is finishing cleanup at K Area outside of the fence and will soon knock down the Plutonium Finishing Plant (PFP).
- Key performance goals, developed yearly based on budget assumptions, make the 2015 Vision a reality.
- Statutes under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA) require public involvement, and DOE embraces that as a fundamental part of the cleanup process.
- DOE is nearing the completion of corrective actions on the beryllium cleanup program based on DOE Health, Safety, and Security assessments performed in spring 2010. The assessment included a major revision of chronic beryllium prevention and disease program implemented by contractors. In the process, DOE is nearing a best-in-class beryllium program to protect workers from beryllium exposure.
- DOE finished development of an employee concerns procedure to better support employee concerns in the workplace. With the procedure in place, employees will be treated in the same way in terms of confidentiality and being informed throughout the process. All contractors have signed the procedure, including Bechtel.
- DOE reached a landmark of removing over 13 million tons of material disposed at the Environmental Restoration Disposal Facility (ERDF) and is on track to complete River Corridor cleanup, including liquid waste sites. Source contamination will be eliminated at the end of the calendar year.
- DOE has installed five pump-and-treat systems that currently treat chromium along the Columbia River. It is predicted that chromium will be cleaned up by 2030 or earlier. Over the next few months, the source term will be removed so that the groundwater does not become contaminated in the future.
- 324 Building has a technical challenge of high levels of radioactivity discovered in the center of the building in the ground beneath the hot cell. The contractor is currently looking at a proposal for how to safely excavate the soil in order to remove the building. Building removal will likely take between two and three years, and this project is on track to meet the TPA milestone of 2018.
- A barrel stored with contaminants was discovered in 618-10 Building. The next challenge in this location is to remove the vertical pipe components. This will likely be completed in 2015.
- 340 Vault accepted high radioactivity liquid waste, and there are hundreds of tons to remove. Contractors are putting braces beneath the vault and will transport it on a trolley to the ERDF facility in fall 2013.
- At PFP, it is a high priority to remove glove boxes in the facility. The majority of this work involves stripping out contaminated equipment, asbestos, lead and minimizing the chance of spreading the contamination when the facility is knocked down. Thirteen gloveboxes have been removed as of end of summer 2013, and the TPA milestone to complete cleanup at PFP is 2016.

DOE is working to ensure workers are protected from plutonium exposure in terms of ventilation, inhalation or puncture.

- The Hanford Groundwater Cleanup Strategy guides DOE for implementation of cleanup under RCRA and clean groundwater on the Central Plateau to meet RCRA cleanup standards.
- 200 W Pump and Treat was built to treat all contaminants of concern on the Central Plateau, except trillium. DOE will install increased capacity for uranium contaminated groundwater and will focus on uranium plumes on the Central Plateau to prevent uranium contamination from reaching the river.
- Of the fifteen million tons of contaminated material disposed of at ERDF, over thirteen million tons came from the River Corridor, eliminating the threat to the Columbia River by removing chromium, cesium, and strontium contamination in the soil.
- B Reactor is under consideration for national park status. U.S. Senators Ron Wyden and Patty Murray visited the facility to endorse related legislation.

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

Kevin Smith, DOE-ORP, provided an update on annual activities and accomplishments for DOE-ORP; his presentation is provided as Attachment 2. In addition to the information contained in his presentation slides, Kevin emphasized the following in his remarks:

- DOE-ORP is currently working on C Farm retrievals. Retrievals at C 101 stopped briefly due to a lightning storm and are expected to resume on September 5, 2013. DOE anticipates the possibility that C 105 and C 102 could be completed on time to meet the TPA milestones.
- Tanks built in the 1940s, 1950s, and 1970s were buried underground with high hazard capability. The tanks are aging and are monitored daily through the Single Shell Tank (SST) and Double Shell Tank (DST) integrity programs.
- Construction of the Waste Treatment Plant (WTP) will resume for the high level waste facility for parts of the building that could remain in place following technical issue resolution.
- U.S. Energy Secretary Moniz has helped develop an appropriate path forward for WTP and has supported activities to continue cleanup.
- The FY 2013 budget allotment is insufficient to continue work planned for the Tank Farm project.
- For WTP, control points (or limits on spending by item) remain a challenge in 2014 with or without a continuing resolution. The appropriate offices in Washington, D.C. are engaged in trying to resolve this issue.
- DST AY-102 is undergoing an enhanced monitoring process consisting of pumping out the leak detection pit outside of the tank. After pumping, DOE discovered an elevated reading, analysis, which yielded no secondary data indicating a breach of the secondary confinement. DOE will continue to monitor the leaking tanks and pit.
- DOE will brief the Defense Nuclear Facilities Safety Board on technical issue resolution with a complete plan.
- DOE is working to train supervisors to be the type of managers workers would want to work for. DOE asked employees to submit ideas for a “Grand Challenge” that would save \$25 million. Employees narrowed the 25 suggestions down to three and developed concept papers for implementation.

*U.S. Environmental Protection Agency (EPA)*

Dennis Faulk, Environmental Protection Agency (EPA), provided an update on annual activities and accomplishments for EPA. Dennis noted the following key points:

- EPA has a new administrator from Boston (Gina McCarthy), and Rick Albright is the new EPA director in environmental cleanup.
- EPA experienced a furlough in FY 2013 and will likely experience sequestration again in FY 2014. This makes it difficult for the agency to plan work, as it is challenging for DOE to make enforceable commitments without sure funding.
- The four major projects EPA oversees include Groundwater, PFP, River Corridor, and K Basins. Due to lack of funding, the Central Plateau remedial investigation feasibility studies (RIFS) and Transuranic (TRU) Waste have been postponed.
- Groundwater cleanup is EPA's first priority. EPA has been in discussions with DOE on 200 West (200 UP-1) and are in informal dispute and did not accept DOE's original schedule. Something will have to give on the other three projects to bring this work forward, however. There are three priority projects in groundwater to be funded in the next three years: N Area apatite barrier installed, 200-UP-1 uranium plume addressed, and more aggressive action with 200 BP 5 groundwater, in particular the perched water table. EPA will likely enter into more formal negotiations regarding groundwater cleanup.
- Dennis noted that, on a positive note, the 200 W pump-and-treat facility is operating very well, and it will be possible to retrieve all chromium from the groundwater in this area, and also use it to address ERDF leachate.
- The Board work plan for FY 2014 is more aggressive than EPA's view on the cleanup. EPA will not get to all of the issues on the HAB work plan.
- Dennis noted that the Board work on diversity over the last year and the resulting Board letter is one of the best products the Board has produced in years.
- Dennis said that he is glad that the State of the Site (SOS) meetings are coming back next year, as public dialogue about successes and major challenges is important.

*Washington State Department of Ecology (Ecology)*

Jane Hedges, Ecology, provided an update on recent activities and accomplishments for Ecology; her presentation is provided as Attachment 3. In addition to the information contained in her presentation slides, Jane emphasized the following in her remarks:

- Ecology has a new director, Maia Bellon. Maia noted her interest in attending a Board meeting in 2014.
- Jane thanked the Board for developing the HAB diversity letter and noted that Ecology is considering how best to proceed with response to comments.
- The Ecology communications team has been working with classes of students and has increased the email distribution list.

- Ecology has requested two additional staff members to maintain inspection levels for Hanford and other sites. To provide approval, the State needs to authorize Ecology to spend the money to fund this. Ecology is looking to secure funding for Hanford at the national level.

*Board questions and response*

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

Q. All known chromium contaminated soil along river is projected to be completely removed by December 2013. May a student quote DOE as such in a report?

*R. [DOE-RL] DOE can provide a statement that can be used in the report.*

Q. How do you feel that the Lock and Tag is progressing as part of the Site Wide Safety Standards?

*R. [DOE-RL] Lock and Tag is undergoing a maturing process. There have been issues with implementation in the procedures, and there is a feedback process in the committee that oversees that procedure at Mission Support Alliance (MSA). Lessons learned are captured, and due to the consistency across contractors, there is continuous program improvement.*

Q. When will DOE be able to discuss re-baselining with regard to retrieval of tank waste?

*R. [DOE-ORP] Individual technical issues are not all equal, and it is anticipated that within the next few months DOE will have one or two technical issues solved. DOE will need to prove to agencies and stakeholders that issues are resolved prior to re-baselining discussions.*

Q. Would DOE be able to attend the Tank Waste Committee (TWC) meeting in October to provide details on the path forward regarding what the Secretarial Teams' have been working on?

*R. [DOE-ORP] DOE believes it is important to leave this discussion between DOE and the State of Washington for now. The Secretary of Energy is intimately involved in the discussion, and at the first opportunity, DOE-ORP will provide an update to the Board or committee.*

Q. What are the safety precautions for the reactors that still contain the core?

*R. [DOE-RL] There is a program on environmental data called Phoenix. This is a useful tool to understand the challenges to groundwater cleanup. Safety precautions include putting the reactors in interim safe storage, stripping out building contents that may be contaminated, and capping structures to seal out biological elements and prevent access by rain or animals. Every five years DOE will inspect the structures to confirm nothing is inside in terms of water intrusion or animals nesting. DOE performs a seismic analysis to determine the type of earthquakes the core can withstand.*

Q. There have been technical issues at the Waste Treatment Plant (WTP or Vitrification Plant). Who is solving these problems, and what is their involvement and background experience?

*R. [DOE-ORP] Professionals from Pacific Northwest National Lab (PNNL) and Center National Lab (CNL) have been hired under the WTP project to provide technical capabilities. To concentrate this effort, DOE has convened a weekly meeting with all Bechtel senior leadership on*

*each aspect of the known technical issues. Internally, DOE also has a great amount of technical expertise to carry out the work.*

Q. Supernates were removed from the leaking SSTs this past summer. Interstitial liquids drained and leaked out. What actions have been taken to deal with this issue?

*R. [DOE-ORP] Analysis on the six leaking tanks will be completed at the end of September 2013. The TWC will receive the latest update on the leaking tanks' status. The SST integrity program is a priority to maintain funding and level of effort. Of the six tanks known to be leaking, four have been stabilized, and the outstanding two look sound. Technical analysis indicates the walls are sound in these two leaking tanks, and the leakers are still within interim stabilization criteria. The highest priority is what to do with T-111 and determine if the material therein can be dispositioned to TRU processes and shipped to the Waste Isolation Pilot Plant (WIPP).*

Q. It was mentioned that the Low Activity Waste facility (LAW) was in its completion phase. Is DOE nearing startup at LAW, and can any money be shifted in order keep facility construction on schedule?

*R. [DOE-ORP] DOE is seeing results that support bringing a second facility online. Sequestration put some of the equipment vendors out of business. Bechtel was able to find a different vendor for certain parts. Startup at LAW is dependent on at least a federal budget continuing resolution.*

C. The Health, Safety, and Environmental Protection (HSEP) committee is identifying possible safety issues for the future at Hanford Site. One issue that was brought up relates to access and monitoring of the inter-site cross waste transfer line. Documentation from DOE shows potential issues for the inspectability of the line. The crawlers developed to inspect beneath the tanks for inspection may be transferrable for use to inspect the line as well. It would be good for DOE to look into the feasibility of using the same technology.

*R. [DOE-ORP] A snake crawling technology may have developed that capability, and DOE is looking into technologies to meet the need.*

Q. Over the past year, the question in the public's view is how to respond to SST and DST leaks. The Board has been the only public forum for discussion to share information. No formal public meetings have been held on this topic. DOE has said that the agency will produce a plan. The waste can be dried and stored on site in RCRA-permitted storage, which could resolve the issue of what to do with the tanks when there is a lack of capacity for DST transfers. Is DOE looking into commercially available treatment for drying the waste in the leaking tanks?

*R. [DOE-ORP] As currently managed, the DSTs are connected with pumps to be able to remove the pumpable liquid from the tops of the tanks. The waste at the bottom would still need to be managed appropriately. If the DSTs are pumped down below a certain level, heat cannot be managed, which would rule out the ability to monitor below the tank. DOE is meticulous in analyzing tanks, which is time consuming. DOE is working to develop a real time communications plan to provide updated information and be as transparent as possible and is working to find the most economic and effective way to manage the material in the tanks. Drying the material in the tanks is expensive, and moving the material out of SSTs or DSTs is not an easy proposition that would require many accompanying safety features. All other safety basis requirements take precedent. Every effort will be taken to find a way to properly dispose of the material.*

*R. [Ecology] The State is looking into options to deal with the waste in the tanks, which is high-level waste, the definition of which does not relate to radioactivity. Ecology is considering waste disposal options in New Mexico, and until a permitting decision is made, a permitting decision cannot be made at Hanford so as not to create orphaned waste. The greatest issue of concern on this issue is removing the waste will preclude it from being routed to WTP if it cannot be transferred to a different site.*

Q. If it were determined that a new tank could be built if needed, what would be the process for building the tank?

*R. [DOE-ORP] Building a new tank would be a new line item in the cleanup budget. New tanks cost approximately \$100 million per tank and would take a minimum of seven years to build. This would be a large endeavor that would go into the 413 process, and Congress would need to approve the line item in a construction project. Per information in the SY 102 book on what is needed to properly construct a tank, it would be a three-year process before construction can commence for any Category 2 nuclear facility project. DOE is considering all options and has not yet made a decision for how to move forward.*

C. Information has arisen that may constitute waste on a construction site. This information will be provided to DOE following the Board meeting.

*R. [DOE-ORP] That information would be appreciated.*

Q. There is an unknown contamination problem in the soil beneath K East. Is DOE taking actions to determine the level of contamination?

*R. [DOE-RL] There is contamination beneath the reactor where the basin mated with the reactor proper. The level of contamination needs to be confirmed in a manner that will not compromise the structure.*

*R. [DOE-ORP] Sampling plans have been approved, but the work needs to be funded.*

Steve Hudson closed the Q & A session and thanked the agencies for their presentations.

### **HAB and Agency Group Photo**

The Board took their annual photo. The photo is provided as Attachment 4.

### **Board and Committee Reports**

#### *2013 Board Accomplishments*

Steve Hudson noted the time-consuming process and hard work that goes into producing Board advice and written comments such as letters of consent. The Board has not been able to complete as much as the Board wanted. Budget constraints have made it difficult to convene committee and Board meetings. Furthermore, the delay in receiving agency documents has delayed the Board's work, and topics have been removed from the Board's work plan in DOE review. The Year-End Review of Accomplishments shows the complex work the committees have completed in FY 2013, including:

- 8 Pieces of advice, including advice from PIC regarding the SOS meetings and advice on the TPA change package
- HAB values white paper
- HAB letter regarding the Tank Closure and Waste Management (TC&WM) Final EIS
- Letter to DOE-RL, DOE-ORP, EPA, and Ecology regarding board diversity and other effectiveness issues
- Emerging tank issues have been reordered in work plans

A hard copy of the Year End Review of Accomplishments has been provided to the TPA agency representatives today, and will be sent out electronically to the Board and other agency representatives.

#### *Budget and Contracts (BCC)*

Jerry Peltier reported that the BCC will discuss DOE-ORP budget requests for 2014 and 2015 and budget prioritization in September. Jerry noted that there is a BCC committee call Tuesday, September 17 during which the committee will receive a DOE presentation on the budget priority system instead of holding a meeting. This will be a topic for discussion for a committee meeting anticipated to be held in October.

#### *Health, Safety and Environmental Protection (HSEP)*

Becky Holland said that HSEP has been busy, and working on a number of issues in collaboration with TWC. HSEP has no meeting, but will have a call in September. For the next meeting potentially in October, HSEP will likely discuss flammable gas issues in conjunction with TWC, emergency response preparations and how to communicate with the public, emergency preparedness, and open air demolition of the PFP and 324 Building as a joint topic with the RAP committee. Becky also attended the August emergency drill and expressed appreciation to DOE for escorting her around during the drill.

#### *Public Involvement & Communications (PIC)*

Liz Mattson reviewed what the committee discussed at the September meeting:

- Public involvement strategic planning, including goals for public education and outreach for the NEPA RODs for the TC&WM EIS and 100 F
- 300 Area public meetings debrief
- Public understanding of waste definitions
- Standardized and thematic public involvement survey questions
- Upcoming topics, including public involvement tools and techniques, 100 Area feasibility study (FS) proposed plan, and air operating permit.
- October 2013 State of the Site (SOS) meetings are planned for:
  - October 10, Richland, WA
  - October 15, Seattle, WA
  - October 16, Portland, OR
  - October 17, Hood River, OR

- The PIC will be working with Ecology on a potential presentation regarding the RCRA air operating permit during the public comment period.

#### *River and Plateau (RAP)*

Pam Larsen said that the process of getting to a final ROD involves RIFS analysis. These are technical and scientific documents that lead to proposed plans. The RAP has had the opportunity to review early drafts of this material, which will frame the final cleanup of the River Corridor.

Pam reviewed topics for the September RAP meeting:

- 100-N RIFS and proposed plan. Pam noted that Draft A is out for comment, and regulatory agencies are providing comments in September. The Rev. 0 draft will become available in December. The committee will look at differences between draft A and Rev. 0 and will likely produce draft advice on this topic.
- 300 Area proposed plan
- Groundwater remediation technologies

Long-term topics of interest to RAP that have been delayed by funding include:

- Burial ground remediation
- 618-10 and 618-11 efforts and path forward for vertical pipe unit design
- Remediation of the 324 Building
- K Basin sludge

Dennis informed the Board that the 100-N proposed plan will be delayed and won't be going to Rev 0 this year. It will most likely be out in 2014 or 2015. It is very complex and will need to be reviewed by EPA's remedy review board.

#### *Tank Waste (TWC)*

Dirk Dunning reviewed topics for the September TWC meeting:

- System Plan
- System Plan modeling
- AY 102 and T 111 waste removal

#### *Executive Issues Committee (EIC)*

Steve Hudson reported on the September EIC discussion and noted that the EIC consists of chairs and vice chairs of other committees and typically meets the evening prior to Board meetings. The 2013 and 2014 calendar and work plan are products of EIC. Steve noted that meeting cancellations due to scheduling difficulties or meetings by phone have resulted in the understanding that some meetings must take place in person. Steve noted that management and access of distribution lists, and the National Liaison position are likely topics for discussion on the EIC agenda in December. Steve said that the HAB

is the only environmental advisory group and site-specific group to have a National Liaison, and the role of this position is not well-defined in the process manual.

#### *EM-SSAB*

Steve said that the HAB will be hosting the EM-SSAB meeting in April 2014. Steve reported on the bi-monthly EM-SSAB call and noted that a highly detailed summary from the call is available and would be helpful for Board members to review, as the problems discussed are shared with HAB issues. Susan Leckband has also produced a brief summary of the call. Susan and Steve will be attending the Board meeting for Board Chairs and need help developing a question for David Huizenga, Senior Advisor for Environmental Management, U.S. Department of Energy, Office of Environmental Management (DOE-EM). Chairs have a five minute opportunity to ask a question. Also, during the meeting there will be three educational roundtable opportunities focusing on issues from the Boards' perspectives related to property transfer and asset reuse and using materials that have been used in radioactive situations that can be cleaned up.

#### **Draft Advice: Leaking Tanks**

##### *Introduction of Advice*

Dirk Dunning noted that this is the second time this piece of advice is being brought before the Board (revised from prior draft advice Double-Shell Tank AY-102). Revisions focused on the factual basis for the timeframe of requests. The purpose of this advice is to address pumping and draining the waste from the known leaking single-shell tanks to prevent further leaking directly into the environment and to construct new tanks to create more space for waste storage. In particular, AY-102 is of concern because the waste has leaked out of the internal shell and has begun to collect in the annulus. The outer shell was not built with the intent to hold waste for long period of time, and it is unknown how long it will last as a protective barrier between the annulus and the environment.

##### *Agency perspectives*

Dennis Faulk, EPA, noted that including technical information and discussion of sampling in this advice detracts from the advice's policy-level influence. The advice would have been better broken down into two pieces of advice, one focusing on policy and the other on technical information.

John Price, Ecology, clarified that the regulatory requirement in place is to pump the tanks within 24 hours or as soon as is practicable. The definition of what is practicable has not yet been agreed upon among the TPA agencies.

##### *Board discussion*

The following key points were noted during Board discussion:

- One board member noted that this advice is well written, but that the Board might consider including in the advice a point about a contingency or repair plan to meet the possibility that a DST could leak. Viable options were presented in the past, though at that time it was not favorable to reference the notion that a DST could leak and so was disregarded.

- Three Board members proposed that the Board should consider adding an advice point about the potential for waste removal from leaking SSTs and to DSTs without the risk of forfeiting the waste's potential to go to WIP. A treatability test would demonstrate feasibility for drying the waste to be packaged for immediate permissible RCRA storage. This is an important opportunity for the Board to present an alternative avenue to pumping liquid waste and taking up DST space. It is now known that the tanks are leaking, and more will leak in the future. This proposal was discussed at length. Due to a number of Board members objecting to its inclusion in the advice, it was ultimately decided that this recommendation needed further vetting by the committee. The Tank Waste Committee will further discuss this point and determine if it should be brought back to the Board as advice.
- Three Board members noted that the waste in the tanks is high-level waste and needs to be treated accordingly. The tanks were interim stabilized by removing the viscous liquids from the tops of the tanks. Three quarters of a million gallons of waste remain in SSTs.
- There was considerable discussion about the wording around the regulatory requirement to pump waste from leaking tanks as described in the background to the advice. The Board negotiated and agreed on alternative wording.

After edits to language, including consolidating and reordering points for concision and clarity, the Board adopted the advice.

### **Draft Advice: DOE-ORP Budget Requests**

#### *Introduction of advice*

Susan Leckband explained that over the past few years, the Board has been dissatisfied with budget priorities. The Board takes seriously its charge to provide budget priorities based on its values. The Board needs more in-depth budget information in order to develop informed budget advice. The Board is hopeful that the current level of information available to the Board could change in the future and that the Board and the public will be provided with more information earlier for advice relative to future budget requests.

#### *Agency perspectives*

Ben Harp, DOE-ORP, said that this year DOE-ORP was unable to provide budget information due to complications from leaking AY-102 and T-111. Due to the uncertainty of the plan for these tanks, DOE was unable to provide budget priorities within the usual timeframes.

John Price, Ecology, noted that this is well-written advice. Ecology views budget as an important matter critical to establishing the right work for tank cleanup.

#### *Board discussion*

The following key points were noted during Board discussion:

- One Board member noted their participation in the collaborative process developing this advice and said the process is impressive when it works as it should as it did in this instance.

- One Board member said that HAB review of the proposed budget and what is funded in the ORP line item is very important. There is a large value difference if money is spent investigating or emptying SSTs.

The Board adopted the advice without edits to language or content.

### **300 Area Proposed Plan, Rev. 0**

#### *Introduction of the topic*

Dirk Dunning introduced the topic of the 300 Area Proposed Plan, Rev. 0 and noted that DOE draft plans go through a series of drafts (A, B, and C) before becoming revision 0, or Rev. 0. On behalf of Dale Engstrom, HAB Issue Manager, Dirk noted that the RAP reviewed Draft A and Rev. 0 of the 300 Area Proposed Plan and found significant changes between the two versions. Due to the changes between the versions, RAP requested the opportunity to bring the topic before the Board and discuss the issues. Concerns with changes made between the two versions include:

- The uranium treatment is untested technology, and DOE does not know how effectively the uranium will be cleaned up according to methods outlined in the plan or how long the mineral created will last in the Hanford groundwater environment
- The new alternative treats the area that was going to be the test area in the previous alternative with uranium sequestration and no longer treats a larger contaminated area outside of that once the test has been deemed successful
- The proposed plan does not address other contaminants of concern, particularly trichloroethylene in the bottom of the aquifer, nitrate, and a number of other fuel rod-related elements like technetium that are above the maximum contaminant limits in groundwater
- There was no new data collected about the plume and groundwater flux since HAB Advice #257 on the 300 Area Proposed Plan, Draft A, and more information may be needed
- Lastly, there is no backup plan if this technology is not effective

#### *Agency presentation*

Mike Thompson, DOE-RL, provided a presentation on the 300 Area Proposed Plan Rev. 0. His presentation is provided as Attachment 4. In addition to the information contained in his presentation slides, Mike emphasized the following in his remarks:

- DOE is the lead agency responsible for cleanup in the 300 Area, which is located just north of the City of Richland. During operation, the mission of work in the 300 Area was research and development. Fuel rods from the reactors were brought back to the 300 Area for testing and processing. Uranium is the primary contaminant found in this area, specifically found in the north and south process ponds. 600 Tons of uranium has leaked to the surrounding ground area through aqueous form. The agency held three public meetings in August on the Proposed Plan, and the public comment period closes on September 16, 2013.
- The Proposed Plan is for cleanup of contaminants related to any activity in the 300 Area, including the uranium plume in the 300 Area industrial complex and the tritium plume, which is the largest concentration of tritium contamination on site. The nitrate plume coming from offsite is due to nearby agricultural and industrial facilities and is not included in the plan.

- There has been tremendous progress in digging out waste sites in the 300 Area. Liquid disposal facilities are a major source of contamination. More than 740,000 metric tons of uranium-contaminated material have been exhumed and taken to ERDF from this area. Many of the more challenging sites have yet to be dug up, including 618-10 and 618-11, which were radiologically hot burial grounds.
- Under the interim ROD, contaminated structures are to be removed along with the soil at least 15 feet below grade. At some waste sites, this means digging to groundwater.
- Completed work has been reviewed to ensure that requirements are met and that completed sites are determined protective of human health. DOE's outlying primary interest is contamination of groundwater in the 300 Area caused by residual uranium under process trenches. One existing plume was created by excavation and subsequently mobilized uranium through water used in dust abatement
- Challenges with the north and south process ponds adjacent to the Columbia River include dealing with groundwater related to the periodically rewetted zone. When the water level rises to the rewetted zone level, uranium makes contact with the groundwater; the higher the water level, the higher the uranium levels are in the river.
- The Proposed Plan indicates estimates for how long it would take for all of the uranium contamination to flush itself out into the river. Results from modeling show that drinking water standards would be achieved after 30 years without any money expended for remediation.
- People downstream are concerned about groundwater contamination. The uranium is getting into the river, but the amount getting into the river at levels below drinking water thresholds. The drinking water in the City of Richland meets all City requirements as well as exposure requirements for the environment, including exposure requirements for rainbow trout.
- DOE intends to maintain the 300 Area as an industrial zone. Surface cleanup will be protective for any use, but the area will not have the same level of consideration for irrigation. DOE does not believe there will be irrigation in the industrial zone.

#### *Agency perspective*

Dennis Faulk, EPA, specified that the fundamental difference between Proposed Plan Draft A and Rev. 0 is a sharper look at the uranium plume cleanup.

John Price, Ecology, noted that EPA and Ecology regulate different areas of Hanford Site. When EPA is the lead regulatory area on a site as is the case in the 300 Area, Ecology's role is to sign off on a Proposed Plan. At this time Ecology does not have any fundamental concerns about the remedy but will still review and consider public comments received on Rev. 0.

#### *Board questions and response*

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

Q. What is the difference between concentrated releases of contamination and more distributed releases, such as contamination from fertilizer?

*R. [DOE-RL] There was at one time a pump that carried uranium to what is now the periodically rewetted zone. DOE has studied the area and identified the location of the highest concentration*

*of contamination. 16 Samples taken through a risk assessment program showed 137 micrograms/liter. The highest measurement along the shoreline where there could be concentrations that may affect biota are considerably lower than both the no-effect concentration level and the embryo viability level for rainbow trout (910 micrograms/liter and 137 micrograms/liter, respectively). Meeting drinking water standards within the aquifer is the major issue of concern. DOE does not yet have a means of collecting real-time long-term monitoring of river gravels. A proposed technology offered for remediation is from a mining company in New Mexico.*

Q. What were the output measurements on groundwater for trichloroethane (TCE) and dichloroethane (DCE)?

*R. [DOE-RL] There are two geological formations in the 300 Area related to the uranium plume: Hanford Formation and Ringold Formation. Primarily comprised of sand and gravels, the Hanford Formation is nearest to the ground level and allows groundwater to travel an average of 50 ft. per day, while most groundwater travels about 1 ft. per day. Through a limited field investigation program, DOE discovered three wells with TCE and limited concentrations of DCE in the Ringold Formation, which is comprised mostly of silty, hard compacted sand and sites below the Hanford Formation. Due to its depth, there is limited ability to pump water out of the Ringold Formation. The TCE and DCE concentrations found in the Ringold Formation are degrading naturally over time, and two samples in the last five years have exceeded 5 micrograms/liter for TCE and ten times the standard for DCE.*

Q. The shorelines are of statewide significance due to critical habitat. What is the distance between the waste sites and the shoreline and high water mark?

*R. The shoreline and high water mark are likely more than 250 ft. from the waste sites.*

Q. Will the uranium eventually leach back into a soluble solution once in phosphate form?

*R. [DOE-RL] 40-60% of the uranium in the soil is mobile, d in a carbonate form. By injecting phosphates into boreholes downstream, the uranium can be brought into a phosphate form, which is a much more stable, less leachable mineral. In phosphate form, the uranium will not leach out to the groundwater and add to the levels that exist currently.*

Q. Is it possible for there to be an event that could cause the organics to flush up from the Ringold Formation into the Hanford Formation?

*R. [EPA] The uranium contamination in the Ringold Formation is localized and at great depths. The contamination is not located in a place where someone would choose to locate a well. Moreover, the contamination is not a large plume that DOE can readily access and excavate to accelerate cleanup.*

Q. Is there a mining site that is using phosphate treatment?

*R. [DOE-RL] There is a uranium site in New Mexico that uses phosphate treatment.*

Q. Will a larger problem be created by injecting phosphates into the soil, such as a plume of microbes in the release path?

*R. [DOE-RL] DOE understands this concern. The amount of phosphates used in the treatment will not reach an amount where surface water bodies will become over-nutritized, depleted of oxygen, and die.*

Q. Excluding irradiated sources, does the process trench hold an equivalent amount of uranium to the fertilizer source?

*R. [DOE-RL] The concentration reaching the river is currently 100 – 150 kg per year. The goal is to restore the aquifer in a more certain, shorter timeframe.*

C. This is the first area along the Columbia River where DOE has reached the environmental process stage of producing a final Proposed Plan and ROD. DOE has had a lot of interaction with the RAP committee over the years, and RAP is appreciative for DOE's and the regulators' ongoing engagement with the committee. As a result of the discussions and concerns put forward, a more focused remedy has been selected for the uranium plume.

### **Sounding Board: 300 Area Proposed Plan, Rev. 0**

#### *Introduction of process*

Susan Hayman, EnviroIssues, reviewed the sounding board procedures and noted that each Board member and alternate is allotted two minutes to share the perspective of the seat and constituency represented. Once all Board members and alternates had the opportunity to comment, they were offered an additional comment opportunity due to time allowances. Comments were geared towards the following prompts:

- Share your thoughts about preferred alternatives / proposed remedies.
- Looking forward to the development of the next proposed plans for the River Corridor, what process improvements would you suggest? F Area will be next.

Dennis Faulk, Ecology, reminded the Board that the preferred alternative is to remove the soil contamination in the thirty-four remaining sites, send the contaminated soil to ERDF, and sequester the uranium in the Deep Vadose Zone under the process ponds.

#### *Sounding board*

##### *Harold Heacock, Tri-Cities Industrial Development Council*

The preferred alternative is well thought out and gives a basis to go ahead. In terms of the entire River Corridor, my concern there is focusing on identifying the major risks, and getting those areas cleaned up before the money runs out. There will be other national priorities in Hanford cleanup. In the river corridor, there are a few remaining problem areas that should be addressed, and I would prefer to see the focus on those. Those are more of a priority than getting the Central Plateau moving.

##### *Liz Mattson, Hanford Challenge*

Because uranium sequestration is untested, we need to make sure it works. How will we know cleanup is successful if we do not ensure the methods used are effective? We need a backup plan. If uranium sequestration does not work, we need a plan in place so that cleanup can be finished as soon as possible, before more uranium gets into the groundwater and river. We support removal, treatment, and disposal (RTD). RTD is often the most effective way to clean up contamination. When it is, we support its use.

Specifically, we believe RTD should be the backup plan in the event that uranium sequestration does not work. Monitored Natural Attenuation (MNA) would not achieve the cleanup goals in a timely, safe, or effective manner. The entire 300 Area should be cleaned up to a residential standard. It may be possible to fence off the industrial complex and guard it for a while, but this cleanup sets the standard forever. We will not be able to control the land forever, and we do not want to limit its use to industrial use forever. Furthermore, industrial standards do not protect the Tribes' use of the land according to treaty rights. We believe this cleanup should not cut corners and want to keep in mind that whatever choice is made now has to last far into the future. Humans have a tendency to forget about contamination that is left behind after cleanup is complete, despite assurances that land use will be regulated. I ask that the agencies continue to work with the HAB through the RAP and the PIC with F Area and other cleanup decisions with early access to the drafts and early planning around public involvement activities.

*John Howieson, Physicians for Social Responsibility*

My focus is on trying to assess the threats to human health. I believe that the improved removal of the most concentrated deposits of uranium that would be accomplished by Alternative 4 would not have enough impact on human health for it to be worth the approximately \$280 million that it would cost to do it. Those funds would be better expended on other parts of the Hanford cleanup, particularly the leaking Tanks and the soil contaminated under and around them. Therefore, my view is that the selected alternative is the wisest choice under the circumstances.

*Richard Bloom, City of West Richland*

The City of West Richland gets one eighth of its water from Richland. West Richland has water rights out of the Columbia River provided from the City of Richland. Water reports compared between Richland and West Richland show no difference between the two cities. The small quantity of uranium leaching into the river makes no difference. While it is not leaving it pristine, any human activity will not leave it pristine. I believe the preferred alternative is a good alternative.

*Barbara Harper, Confederated Tribes of the Umatilla Indian Reservation*

Which waste sites have been dealt with, locations of residual landfills, and the definition of clean closure are nearly impossible to find out through research in the Remedial Investigation/ Feasibility Study (RIFS). We push for a post-closure risk assessment, which is needed in order to prepare an institutional controls map. We prefer that more hotspots be excavated. It was not clear from the proposed plan which mass and concentrations the remaining source of uranium will consist of. If this is unsequestered, it will create a permanent source term, which will require permanent institutional controls, with no irrigation or landscaping ever, which we think is impractical. We are not convinced of the cost for what would be needed in a bigger dig. Spending \$35 million to sequester, or improve a model and reduce uncertainty, may not improve or accelerate drinking water standards. We are not convinced that running an experiment will do more harm than either digging up the uranium or leaving it alone.

*Gary garment, Grant and Franklin Counties*

Having worked in the 300 Area in the 1970s, I am quite amazed at all of the work that has been done there. I have been sharing the cleanup information with Grant and Franklin Counties, and I do not see any problems with the preferred alternative from our viewpoint.

*Susan Leckband, Washington League of Women Voters*

This Record of Decision (ROD) along the river will almost certainly be used for future RODs. Philosophically, I would hope that this cleanup action is as rigorous as is necessary to protect human health and the environment because it will be used as a model. This river is of critical importance to us environmentally, socially, economically, and we need to do the best cleanup possible. For future RODs, I hope DOE will continue to implement their policy of engaging the HAB early and often as we continue

cleanup. Education is paramount. Please continue your ability to educate and fundamentally engage the public. As shown in comments and attendance at the public meetings, continued engagement pays off.

*Mecal Samkow, Oregon Hanford Cleanup Board*

It is concerning that there have been quite a few mentions of uncertainties, as they can make or break a conceptual framework. Regardless of the preferred alternative details, it seems as though DOE can work on developing new and improved technologies for data capture in the river. This may be an inexpensive way to provide more assurance and reduce likelihood of human and environmental exposure. Rationally, I agree with John Howieson and Dale Engstrom, but value based, I agree with Liz Mattson and Barbara Harper. On the rational side, we are accepting that we have made this world this way and there is only so much we can do, but on the values side, we cannot make financial decisions based off ideals. For the next proposed plans, it sounds like the other locations are not as thoroughly cleaned up to date as the 300 Area is at this final stage. It seems like we might anticipate more challenges in terms of public approval.

*Gene Van Liew, Richland Rod and Gun Club*

I think alternative three is the more appropriate approach to use at this time. There should be some consideration with the U.S. Army Corps of Engineers to help change the flow of the Columbia River. Water flow can be changed within two hours and might help control some of the washboard activities. Remedy 5 is too costly and I am not sure that the end results at this time for that cost of money would be appropriate.

*Pam Larsen, City of Richland*

On behalf of the City of Richland, this has been a process of major concern to our mayor and city council. Under the federal court decision regarding Moses Lake, we requested the opportunity to be briefed about the alternatives before the preferred alternative was selected. We believe that the preferred alternative is a good path forward, particularly in consideration of the cost of further RTD and the impact on the river. We have also followed the technology analysis program that DOE has engaged in over the years and they did not find a better remedy to the one that is being proposed. DOE is going with what is the best known solution. It is possible that a better cleanup option will emerge in the future, and we look to a better future consideration under five year reviews. The RAP has appreciated the interaction in the RIFS and proposed plan early draft review. I agree with Harold Heacock that is important to look at major source term. The pump and treats along the river are extraordinary and they are doing an excellent job. As a priority, we hope that they continue to be adequately funded and would promote funding of those to be sure that the ultimate solution is acceptable.

*Norma Jean Germond, Public-at-Large*

At this time Alternative 3 is appropriate. Susan Leckband pointed out an important point that we need to make sure that the public is educated. In the future, if things change, I believe DOE will adopt different, improved processes to adjust to what is happening. I am being trusting at this point.

*Shannon Cram, Citizens for a Clean Eastern Washington*

As one of the youngest members of the Board, I am one of the members who will be inheriting the cleanup for the longest amount of time. I am 33 years old. If it takes 50 years for the contamination to go away, it will be gone when I am 83, and then it will be the onus of my niece and nephew. I believe that this cleanup is a model for other sites, and if that is the case, then as someone who will be inheriting the site, I do not feel comfortable accepting an industrial standard. It assumes a lot about humans and about how they use space, and it assumes a stagnancy that has not been true historically. I am also a scholar of culture and history. Making that type of cost benefit analysis where you are producing a false dichotomy where we only have the funds for this so we have to move forward with it now has gotten us to where we are now. We need to consider the responsibility we have now to future humans that will live here and the moral imperative of our position as people who are making decisions about this space for long periods of

time. I find it problematic to assume that this space will remain industrial for long periods of time and that it ignores treaty rights. I do not agree with the preferred alternative as stated. It is not protective enough, and I would rather see a residential standard across the entire area.

*Dirk Dunning, Oregon Department of Energy (ODOE)*

This statement is on behalf of Oregon DOE, particularly from Dale Engstrom and Ken Niles. There has been a huge amount of work in the last 50 years removing contamination. That is a measure of just how severe contamination was and how big a problem was created. Successful cleanup of the 300 Area is critical for Oregon and other stakeholders, and we would like to believe that the technology selected for the final Record of Decision (ROD) will work. However, there has not been any convincing test of the polyphosphate's effectiveness at creating austenite or any other phosphate mineral, thereby lowering the dissolved uranium in the groundwater, nor am I convinced of the longevity of this technology to hold the bound uranium for a period of time to be protective for the long-term. The opposite, there are many articles, many from the Pacific Northwest National Lab (PNNL) that demonstrate that this technology will not work in the high pH soils at Hanford. Oregon is disturbed by the fact that the new alternative 3A, rather than testing uranium sequestration technology over a small area of 3 to 4 acres of highly contaminated vadose zone and then applying it over a larger area of contaminated vadose zone in the previously proposed Alternative 3, now proposes only to apply the technique over the 3 to 4 acres of high contamination. This approach would allow a large plume of uranium contamination to continue to reside in the vadose zone, continuing to dissolve into the groundwater.

There have been other alternatives proposed that need to be considered more fully. Alternative 4 combines selected RTD with phosphate application. Oregon believes that after a number of attempts to get around the RTD, DOE should consider removing more highly contaminated soils in the vadose zone in the final ROD and apply phosphate for uranium sequestration in the lesser contaminated areas to bind vadose zone uranium in situ. Phosphate solution could also be used as dust suppressant for RTD to mineralize uranium normally liberated during application of water. Also, much of the proposed plan is based on complicated modeling, which in turn is based on very limited characterization. Oregon is not convinced there has been enough vadose zone or groundwater flux data collected to produce a model that can be relied on to predict the entire uranium plume or the effectiveness of the sequestration approach.

*Dick Smith, City of Kennewick*

The health impacts of the uranium going into the river are miniscule at best compared to other things. The reason we have to clean up the groundwater in that particular locale to drinking water standards is not obvious unless it is driven by the commercial interests of the City of Richland and land developers who would like to have wells as opposed to using city water. The overall cost of the program is not trivial. Even the preferred alternatives are expensive. I am not convinced that it is a problem that needs solving at this point in time. I would like to see proof that the austenite formation takes place and works well in the long-term. It seems like it should be possible to determine that before going ahead and implementing it in a larger area. Presentation of results on research and development to the HAB and the public would be more convincing.

*Melanie Myers-Magnuson, "Non-Union, Non-Management" Employees*

Based on my limited knowledge of the 300 Area, I am torn between cleaning up the area to the best of our ability, a method for which I believe is the preferred alternative, and at the other end of the spectrum, there are many areas of higher risk. It seems like the moneys would be more appropriately focused to those areas where there is higher risk and environmental concern. The reality is that we can only spend the money we get, and we need to do a better job prioritizing where it will be spent. I see this area as being a lower risk on the health compared to other sites, and it seems there is a lot of uncertainty and potential that by completed the phosphate testing, which has not yet been conducted at Hanford, we could incur further costs if it does not work appropriately or as hoped. Looking to the future, I would hope DOE

will continue to keep the HAB informed and apply a risk-based approach to considering how to spend tax dollars.

*Rob Davis, City of Pasco*

We need to take a cautious and measured approach to using phosphates before implementing in a large area at the site. If it works as intended, it will prove itself it testing, and we will be better off for testing it.

*Gerry Pollet, Heart of American Northwest*

This proposal leaves half of the uranium in place. It relies on an industrial standard, which defies reasonable expectations of future use. It is not reasonable and it is not healthy for the economy of the region to assume that there will be no development other than industrial, that there will be no irrigated lawns put in for buildings, no excavations for basements or sewer lines, or that there will be no wells drilled. The institutional controls that are being relied on in the proposed remedies across the site continuously say they are going to prevent well use. In the State of Washington, the law says that anyone can drill a well and extract up to 500 gallons per day without notifying anyone. Take a look at the buildings constructed near the 300 Area and the beautiful lawns around them and consider what the future of the area looks like and what it will look like if barred from doing anything but leaving the surface as it is today. The cleanup proposal fails to use best available science. It does not utilize cleanup level for the area based on ten-year-old calculations for our state cleanup level based on toxicity, which would be 1/3 of the proposed current level. The costs of the alternatives are greatly deflated and do not appear to pencil out based on prior expectations, nor do they consider the notion at all of digging up more and applying phosphate if it will work as a mitigation measure rather that digging up more will cause more contamination to the groundwater.

*Emmett Moore, Washington State University*

To the extent that this ROD sets a precedent for future RODs, this ROD should be as protective of human health and the environment as possible.

*Art Tackett, Benton-Franklin Council of Governments*

As a representative of the Benton-Franklin Council of Governments, I agree with Alternative 3A. We have seen over the past 20 to 30 years that things change because better technology is discovered. It is very difficult to sit in the room today and say this is how it will be forever because things change. Alternative 3A is the best approach right now. Looking to the future, we need to look at those areas that will be the next hotspots. Discussions with DOE and the agency's transparency has been very good, and that needs to be continued.

*Kristen McNall, Oregon Hanford Cleanup Board*

There appears to be quite a bit of information and background information on the DOE website. I would like to encourage DOE to continue to make that available as early as possible and would like to request that relevant information available on the Hanford.gov website be linked in the HAB meeting agenda. This would make it easier for new members of the Board to read up on topics in advance of Board meetings.

*Dirk Dunning, ODOE (second comment)*

It is my personal observation that the first cleanup that I know of in the 300 Area occurred in the 1960s. During that cleanup, they found channels in the soil that they did not know were there. These were left over from the great ice age floods and related events. By the 1990s I started work on the Hanford Site. The first interim ROD on this area was released in 1995. There was an attempt to move forward with monitored natural attenuation (MNA). Every couple of years we go through this again and return back to MNA. I am not convinced that this solution will be a solution and that we will not be back at MNA again in five years. Just as a societal problem, on any one single site, the argument about cleanup costing too

much makes good sense. However, one of the things I have seen over my career is that cleanup will only take place up to a lesser degree because we will limit exposure, and residential will be to a lesser degree. Every time this is done, industry builds in clean areas because there is less liability there, and residences end up being built in the industrial areas because it is cheap. This solution leads to a creeping spread of contamination everywhere. The tribal view of thinking of life as a circle is a better approach that gets you out of the loop of use it once and throw it away and contaminate ever more land.

*Barbara Harper, Confederated Tribes of the Umatilla Indian Reservation (second comment)*

In terms of looking forward, a ROD is focused on a remedy and what needs to be done to get to a construction completion point, but it would be great if EPA could also write record-keeping requirements into the ROD. This would allow us to get to a point of archive completion in addition to construction completion. For long-term stewardship, the more contamination that is left behind, the better the records need to be. This would include sites that are clean-closed, landfills, and geo-referencing for institutional control maps. This information has been difficult to find for the F Area.

*Susan Leckband, Washington League of Women Voters (second comment)*

Having worked out on the site for 25 years, much of this time between engineering and construction organizations, I can tell you for a fact that when the money runs out, the as-builts do not get done. When this happens, there is no record of what has been done after cleanup is complete. Money ran out when building an addition onto the Plutonium Uranium Extraction Plant (PUREX), for example, so a bathroom was not installed in the addition.

*Agency reflections*

*Dennis Faulk, EPA*

Dennis stated agreement with Mecal Samkow's comment regarding emotional and rational components of decision making. Dennis also stated agreement with Barbara Harper's request for inclusion of record-keeping information in the ROD. In the end, it needs to be known where contamination is left in place and institutional controls are needed. Dennis noted that he does not foresee putting blanket institutional controls across a whole area. In response to Shannon Cram's comments, Dennis said that he has every reason to believe that humanity will encroach on the 300 Area at some point. If the records are good, that area should support a mixed use. Particularly for the F Area, EPA will work very hard to make sure it is very clear where deep contamination was left in place and where there will be institutional controls.

*John Price, Washington State Department of Ecology*

John Price noted that DOE is not using state of the art institutional controls. State of the art institutional controls are things like trust funds, insurance policies, and annuities, which have some long-term viability. If there is money there, people can do work. DOE as a matter of law is prohibited from using those state of the art institutional controls because they have to rely on annual appropriations. Cleanups of private properties have an advantage over the federal government because they can use better institutional controls.

*Mike Thompson, DOE-RL*

Mike Thompson noted appreciation for the viewpoints stated and said that in terms of industrial vs. residential cleanup levels, DOE is looking into the work that has been completed to date in terms of backfill, top 15 feet, direct exposure to humans and environmental exposure down 15 feet. To date, cleanup looks good. One would be able to spend an unlimited amount of time at the surface without exceeding either environmental direct exposure or environment exposure. The major difference is in terms of the concentration of uranium in the soil that has been left behind and whether that would meet an irrigation scenario in terms of recharge down to the groundwater. The major issue is whether or not irrigation can be installed at the waste sites themselves, which is a small percentage of the sites out there.

Even if institutional control is lost, surface use would be available and not exceed standards. The comments received at public meetings range everywhere from cleanup in the 300 Area is not an issue to why are you spending any money on this when there are other things that really need to be dealt with to, we really need to clean up contaminants as much as possible and not let anything get to the river and make sure that it meets drinking water standards right now. DOE has received a broad range of public feedback and has worked hard to achieve a balance and make sure the decision is protective for both human health and the environment. Mike noted that he believes the preferred alternative DOE put forth achieves this.

*Matt McCormick, DOE-RL*

Matt McCormick thanked the Board for their comments and noted that the sounding board is very helpful to DOE as the ROD is finalized based on the proposed plan and the comments provided.

*Liz Mattson, Hanford Challenge*

Liz noted that the public comment period is open through September 16, 2013. People are encouraged to submit written comments in addition to comments provided through the sounding board. Liz said that Hanford Challenge has created a "Say What Guide" available on the Hanford Challenge website under Get Involved, Comment Writing Guides. This guide serves as a single document in which to find links on everything related to the comment period, including relevant past HAB advice, the document, fact sheets by different groups, Hanford.gov website, videos and more. Hanford Challenges produces these guides for every Hanford Cleanup comment period.

*Steve Hudson, Hanford Watch*

Steve Hudson noted that as the former chair of the Public Involvement and Communications (PIC) committee, his interest is in public information, how people receive material, and how it is expressed. Steve expressed appreciation and thanks for Board member comments.

*Mecal Samkow, Oregon Hanford Cleanup Board*

Mecal noted that she would be interested in hearing more information about the process for cleanup moving forward in the 300 Area, specifically in relation to what happens if more contamination is discovered later.

*Dennis Faulk, EPA*

Dennis noted that under the superfund law, there is a five year review in areas where contamination is left in place. The last three five-year reviews noted that EPA needed to look at uranium, which is why the agency is looking into this now. Dennis said that even when a site is said to have been cleaned up, such as in the 1100 Area for example, more cleanup may be needed in the future.

## **Board Business**

*Confirm 2014 HAB Work Plan*

Susan Hayman introduced the 2014 HAB Work Plan (Attachment 5) and noted that this is an adaptive document that can be revised if new issues arise or change in priority. The Work Plan contains an A and B List of priority topics. The A list includes those topics on which the Board expects to take action and from which it can determine committee work. Susan noted that this work plan is the first one, in her experience, developed through a consensus process with the EIC and agency representatives.

### *Board discussion*

Dirk Dunning noted the importance of addressing issues the agencies have raised in the Work Plan. Specifically, Dirk said he noticed that for the TWC, there was a question about including the waste facility completion issue and wanted to make sure issues are also included for other committees.

Susan Leckband said that over the past year, the Board has paid particular attention to connecting the subcommittees with the overarching Board. Sometimes in the past there has been a disconnect between the two parts, and as a subset of the full Board, the committees are intrinsically connected with the Board.

Barbara Harper noted that long-term stewardship is currently listed on the B List of priorities but should be considered as an A List topic with record-keeping under the long-term stewardship program. Dennis Faulk agreed that this is an A List topic, and the Board concurred that long-term stewardship item would be moved to the A List, with record-keeping added as a sub-bullet.

### *Confirm FY2014 Calendar*

Liz Mattson reviewed the FY2014 Draft HAB calendar (Attachment 6) and noted that Board meetings will be held in new months, with meetings in December, March, May, June and September. The schedule change maintains activity in December, as there is no committee week in that month. The extended timelines for receiving budget information makes a May board meeting more timely for receiving budget advice. June can be held as an option in case May is not timely for a meeting. There was no April Board meeting in 2013.

Liz noted that it is possible that there will only be four board meetings in the 2014 calendar year, but there is a placeholder for five meetings in case the fifth is needed. June is earmarked for an evening meeting, with the time proposed for noon until 8:00 p.m. The intent of this time shift is to see if there is increased turnout with a later time. The December and June meetings are to take place on Wednesday and Thursday instead of Thursday and Friday. The PIC meeting would be held on Tuesday in June.

Liz explained that the proposed calendar changes would be monitored, and if they were not working, a change would be made. The Committee of the Whole (COTW) placeholders were removed from the calendar because they were not being used to plan the COTW meetings. The COTW is a committee-style meeting to which all members of all committees and members of the Board are invited to attend. COTW meetings will be scheduled as needed in the future. For October and November, the blue weeks represent a committee week, which means there is no full Board meeting during those months.

### *Board discussion*

The following key points were noted during Board discussion:

- One Board member said that the Board might consider moving the September meeting to Seattle in order to get the attention of Region 10 EPA representatives and Ecology representatives located in Lacey, WA.
- Steve Hudson noted that with the proposed FY 2014 calendar, there are extended periods of time when the Board will receive information electronically. This means that Board members will need to keep careful track of their email and engage in committee calls and work agendas in order to be effective participants at committee and Board meetings.

- Evening meetings are expected to begin at noon and run until 8:00 p.m. Agency presentations are likely the most attractive aspects of meetings for members of the public. It will be important to ask agency representatives if they would be willing to make presentations in the evening hours during evening Board meetings rather than during regular Board business hours.
- The June meeting is set as the dispensable meeting. It is scheduled on the calendar as a potential meeting and can be used if needed or canceled if not needed. The June meeting can be used as the evening meeting if the May meeting is not held (and vice-versa).
- In December and June 2014, meetings are proposed to be held on Wednesday and Thursday instead of Thursday and Friday, as it would allow opportunities for the general public to attend a meeting during a weekday when they may not be able to attend if they are not working on a Friday.
- One Board member noted that the premise of the evening may be misplaced. Evening meetings are not being conducted to increase public involvement, but rather to increase diversity. In order to do that, the Board should only meet in the evening to allow people who have day jobs to attend the entire meeting.
- A DOE representative noted that it would cost an additional \$30,000 to hold the Board meeting in Seattle rather than the Tri-Cities. Jeff Frey, DOE-RL, indicated that the Board has respectfully and demonstrably cut back on travel costs. Jeff noted that the Board might consider setting a goal of holding a meeting in Seattle and conduct a first quarter review to see if it would be feasible to save money enough to implement it. One Board member noted that it would be helpful for agency representatives to gauge availability of agency higher-ups and hold time on their calendars. If agency officials are unavailable for a meeting in Seattle, it might be best to save the additional expenses of holding the meeting elsewhere.
- A Board member noted that the Board receives limited public involvement and participation and asked if there is enough return from the public to justify the additional cost of holding a meeting outside of the Tri-Cities. While several Board members agreed that holding a meeting in Seattle could broaden public involvement in Board meetings by attracting people that may not otherwise be able to attend meetings in the Tri-Cities, some agreed that it may not be cost effective unless the meetings are held either completely outside of business hours so that individuals can attend the entire meeting after work, and unless agency representatives are available in the evening to answer questions and participate outside of normal business hours. One board member stressed the importance of requesting additional funding from DOE at the beginning of the fiscal year, and Steve Hudson noted that he would send a letter on behalf of the Board to request funding for a Board meeting in Seattle.

#### *Agency response*

Dennis Faulk, EPA, noted that it would be important for the Board to develop an innovative way to engage members of the public at a meeting in Seattle to make the meeting attractive and meaningful for participants to attend without prior background working with the Board or having previously engaged in Hanford cleanup topics.

Jeff Frey, DOE-RL, asked if there was a particular reason why the Board was using the September meeting as a potential meeting to have in Seattle as opposed to a different time of the year. Susan Leckband responded that September represents the end of the fiscal year and the time when the Board plans for the new fiscal year. Requesting the September meeting to be held in Seattle would allow the Board to engage agency representatives on the year's budget status within the context of the following years' planning while discussing fund requests.

The Executive Issues Committee (EIC) will continue to track the costs of current Board meetings, cost-benefit analyses, and interact with agency representatives to see if higher-up agency officials would be willing to agree on funding for and attend a Board meeting in Seattle.

The Board agreed to approve the FY2014 HAB calendar.

#### *Upcoming 20<sup>th</sup> Anniversary Celebration*

Susan Leckband noted that the first meeting of the HAB took place in January 1994. In celebration of the 20<sup>th</sup> Anniversary of the first meeting, the Board is hosting a 20<sup>th</sup> Anniversary Celebration. Due to weather related issues, the proposed date is to be set for May 2014. A celebration in May would maximize budget, coinciding with the May Board meeting. Susan added that she is looking into a manufacturer to create something that Board members could order as a commemorative token of the event. Steve added that it may be nice to include a wall of honor at the celebration to honor former Board and agency participants. The Board also plans to invite individuals who used to but no longer serve on the Board.

Susan Hayman reviewed September committee meetings and calls:

- September 11: RAP Committee call from 4:00 p.m. to 5:00 p.m.
- September 18: HSEP Call 9:00 a.m.
- September 18: BCC Call 10:30 a.m.
- September 19: EIC Call 3:00 p.m.

#### *Preliminary December Board Meeting Topics*

Susan Hayman reviewed the list of potential meeting topics for the December Board meeting, including:

- Electronic tools tutorial, including SharePoint, agency portals, and MeetingSphere
- TWC advice on repackaging waste
- Potential Budgets Committee advice on budget reprioritization process
- Systems plan advice

Jerry Peltier encouraged Board members to participate in a 90-minute webinar on budget prioritization, notice for which will be distributed via email in advance of the webinar.

#### **Closing Remarks**

Steve Hudson thanked the Board for their thoughtful participation and reminded Board members to submit questions for the upcoming EM-SSAB meeting. Steve recommended that the Board read through the notes from the bi-monthly EM-SSAB calls as context for decisions and discussions on the Board. Steve also reminded Board members to read the HAB and committee meeting summaries to keep engaged in topics brought before the Board. The meeting was adjourned.

#### **Attachments**

- Attachment 1: HAB DOE-RL Program Update
- Attachment 2: HAB DOE-ORP Program Update
- Attachment 3: HAB Ecology Program Update
- Attachment 4: Annual Board Photo
- Attachment 5: 2014 HAB Work Plan
- Attachment 6: 2013-2014 Draft HAB Calendar

**Attendees**

**HAB MEMBERS AND ALTERNATES**

Richard Bloom, Member	Gerry Pollet, Member	Laura Hanses, Alternate
Rob Davis, Member	Mecal Samkow, Member	Barbara Harper, Alternate
Sam Dechter, Member	Rosenda Shippentower, Member	John Howieson, Alternate
Gary Garnant, Member	Keith Smith, Member	Mike Korenko, Alternate
Norma Jean Germond, Member	Richard Stout, Member	Bob Legard, Alternate
Harold Heacock, Member	Bob Suyama, Member	Kristin McNall, Alternate
Rebecca Holland, Member	Art Tacket, Member	Emmett Moore, Alternate
Steve Hudson, Member	Eugene Van Liew, Member	Melanie Myers-Magnuson, Alternate
Pam Larsen, Member		Rebecca Rubenstrunk, Alternate (phone)
Susan Leckband, Member	Shannon Cram, Alternate	Dick Smith, Alternate
Ken Niles, Member	Dirk Dunning, Alternate	Steve White, Alternate

**AGENCY, CONTRACTOR, AND SUPPORT STAFF**

Walhed Abdul, DOE-ORP	Dennis Faulk, EPA	John Ciucci, CHPRC
Kevin Smith, DOE-ORP	Emy Laija, EPA	Sonya Johnson, CHPRC
Ben Harp, DOE-ORP	Dieter Bohrmann, Ecology	Dale McKenney, CHPRC
Tom Fletcher, DOE-ORP	Madeleine Brown, Ecology	Dee Millikin, CHPRC
Rob Gilbert, DOE-ORP	Jane Hedges, Ecology	Sharon Braswell, MSA
Jeremy Johnson, DOE-ORP	John Price, Ecology	Dru Butler, MSA
Delmar Noyes, DOE-ORP	Cheryl Whalen, Ecology	Debra Hovley, MSA
Gary Olsen, DOE-ORP		Ross Potter, MSA
Isabelle Wheeler, DOE-ORP	Tom Rogers, WA-DOH	Michael Turner, MSA
Jason Young, DOE-ORP		John Britton, WRPS
James Lynch, DOE-RL		Jim Kelly, WRPS
Edward P. Mertens, DOE-RL		Abby Chazanow, EnviroIssues
Joseph Renevitz, DOE-RL		Tammie Gilley, EnviroIssues
Matt McCormick, DOE-RL		Susan Hayman, EnviroIssues
Kim Ballinger, DOE-RL		

**MEMBERS OF THE PUBLIC**

Annette Cary, Tri-City Herald	Marie Cobb	Theresa Labriola, Columbia Riverkeeper
Barbara Wise		