

**FINAL MEETING SUMMARY**

**HANFORD ADVISORY BOARD**

*February 4-5, 2015*

*Richland, 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 Tank Farm Vapors.

**Board Business**

The Board adopted the FY 2015 HAB Work Plan, received an update on Board procedural and operational issues, and identified preliminary April Board meeting topics.

**Presentations and Updates**

The Board heard presentations on:

- Tri-Party Agreement agency Annual Reports
- Central Plateau Cleanup Inner Area Principles

**Public comment**

Five public comments were provided.

**HANFORD ADVISORY BOARD**  
*February 4-5, 2015 Richland, 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**

Jeff Frey, 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). He introduced Joni Grindstaff, DOE-Office of River Protection (ORP), who will be serving as co-Deputy Designated Federal Official (DDFO) for the Board. Jeff recognized Steve's leadership of the Board and thanked him for his work.

Cathy McCague, EnviroIssues Facilitator, reviewed the meeting agenda and objectives. She confirmed the adoption of the November Board meeting summary.

Steve said the Board recently lost a valued member of their community, Harold Heacock, who was a strong Board contributor, especially for budget and contract concerns. Steve asked for a moment of silence to honor Harold, and asked Board members to join for a drink to honor Howard after the meeting.

Susan Leckband, Washington League of Women Voters and Board Vice Chair, said a card is available to sign for Board member Becky Holland and her daughter, who are both experiencing health issues.

**Draft Advice: Tank Farm Vapors**

*Introduction of advice*

Richard Bloom, City of West Richland (Local Government), introduced the Tank Farm Vapor advice as the result of multiple presentations and discussion in the Health, Safety, and Environmental Protection (HSEP) committee; the advice is not connected to the ongoing vapor analysis being conducted by DOE contractor, Washington River Protection Solutions (WRPS). The advice addresses safety impacts for workers recently exposed, as well as their safety into the future. Richard reviewed the advice points.

*Agency perspectives*

Joni Grindstaff, DOE-ORP, said ORP has had many discussions with HSEP and the Executive Issues Committee (EIC) concerning Tank Farm vapors, and the issue continues to be a part of HSEP's work plan in 2015. There are further opportunities to talk about the future safety operations and respiratory protection at Tank Farms.

Jane Hedges, Washington State Department of Ecology (Ecology), asked the Washington State Department of Health (Health) to provide their perspective on the advice. Earl Fordham, Health (Local Government), said the Board's advice is in line with the letter Health sent to DOE, acknowledging that worker issues are a priority in Tank Farms and its potential hazards. Health supports appropriate use of personal protection devices (PPD) and can help with remission issues. He commended the Board's work on the advice.

Greg Jones, DOE-RL, said the Board's advice point to issue strong guidance to the worker's claims contractor could be problematic, as it could be seen as directing the contractor to do something not in compliance with Washington State law. DOE and its contractors do not approve or deny worker's

compensation claims, the State of Washington does. Greg said DOE has full faith their contractors are meeting legal standards, and DOE does not have influence over the approval or denial of worker's claims. Asking DOE to issue strong guidance assumes DOE does not already require their contractors to follow legal requirements and provide due diligence.

#### *Board discussion*

The following key points were noted during the Board discussion:

- The advice to DOE to issue strong guidance is aimed toward better packaging of worker's documentation as they go through the claims process. The difficult claims process is an additional hurdle to workers, and the documentation of their exposure and side effects lacks when there is a need to identify potential long term effects. The intent is not to ask DOE to circumvent the law, but to address the issues workers experience in the claims process. Greg said DOE's claims process has been externally evaluated numerous times, and it has been determined that DOE does not suppress claims. A claim is approved for worker's compensation when an independent medical provider determines that a worker cannot physically complete the job. Greg said one of the main purposes of worker's compensation is to allow the employee to get back to work, which has been identified as better for the employee in the long-term. DOE makes accommodations when necessary, including moving an employee to a different line of work for a period of time.
- One Board member suggested the advice address vapor exposure issues for as long as they have been a risk on site, rather than just the 2014 exposures.
- The Board discussed the timing of the advice, given the DOE will soon work on implementing safety actions based on the Hanford Tank Vapor Assessment Report, conducted by Savannah River National Laboratory (TVAT Report). The advice is timely, as HSEP believes DOE sees the TVAT Report to only pertain to contractors, not the agency.
- The Board determined to include the TVAT Report's disclaimer in the advice as a footnote, noting that it reflects DOE's acknowledgement that the TVAT Report may be unqualified and they may not follow its recommendations. Jeff noted the disclaimer is standard DOE practice for documents with a large amount of information.
- The Board discussed whether medical providers in the area are sufficiently practiced in issues of chemical exposure. One Board member said physicians may not know enough about Hanford's chemicals and their effects to be able to make a correct determination about treatment or level of injury. Additionally, an independent review making decisions on a patient they have never seen is misleading. DOE noted exposed workers have the discretion to use either a Hanford contractor physician or a private physician for exposure care.
- One Board member suggested workers be involved in further discussion to help identify the issues they experience with the worker's claim process.
- One Board member asked if anything is being done to contact and further document workers who were exposed in the past, as the advice should address the scope of the problem, which includes how DOE is addressing long-term effects. Greg said long-term health is managed by DOE-RL through a website for the Energy Employees Occupational Illness Compensation Program, where current and former employees can be connected to the proper channels.
- The Board discussed missing information for long-term effects to workers. Jeff said workers in hazardous environments are involved in a medical surveillance program, which identifies potential hazards and pre-dispositions based on baseline medical examinations prior to hazardous work as well as continuing medical check-ups. The second advice point asks DOE to work with those previously exposed to develop long-term data.

- Joni said DOE-ORP is working on improving the pre- and post-exposure processes, both from an engineering perspective and administratively.
- One Board member said employees are consistently tested for side-effects, and the data goes back at least 10 to 20 years when there have been other issues. DOE has the records to be able to determine if chemical exposures create chronic diseases. Long-term studies and testing are needed to help doctors make the connection between an exposure and an illness.
- One Board member said it needs to be easier for exposed workers to get time off immediately following an incident to manage any side effects, rather than having to use vacation time.
- The Board discussed the documentation process for exposures and related symptoms after one Board member expressed discomfort with how the advice language was changed to only address documentation of initial acute symptoms. DOE provided an overview of the full medical process and options after a worker is exposed, ensuring that the worker receives copies and has access to their reports and documentation. The Board determined to keep the advice at a higher level than provide exact details on how the documentation should be adjusted, but instead note that it needs adjustment. HSEP will look into technical documentation of chemicals employees could receive access to and be provided with copies for their physicians.

After changes to the advice were reviewed and accepted, the advice was approved.

## **Introduction and Overview: Central Plateau Cleanup Inner Area Principles**

### *Issue manager introduction*

Shelley Cimon, Columbia Riverkeeper (Regional Environmental/Citizen), said the Tri-Party Agreement (TPA) agencies previewed principles for cleanup on the Central Plateau during the November Board meeting, and the presentation left many Board members with questions about cleanup levels, projections for future use, buffer zones, and the use of industrial cleanup scenarios rather than tribal or unrestricted use. Shelley said Hanford is reaching a new stage for the Central Plateau, and it is important to understand the new rules of implementation. Shelley reviewed the approach for today's conversation noting the purpose of each topic and said that today's discussion is not the only time the Board will be discussing this topic.

Shelley provided prompting questions to help Board members provide written comments and/or questions to inform draft advice:

- What did you hear that potentially rises to the need for policy advice?
- What do you still have questions about that may need further conversations to address your concerns?

Note cards were available for Board members to write comments or questions that will be collected by the topic issue managers to help develop a path forward. Shelley asked the Board to also provide feedback on the format of the day's presentations and discussions.

### *Overview of the Central Plateau*

Ken Niles, Oregon Department of Energy (ODOE) (State of Oregon), provided an overview of existing infrastructure and waste sites on the Central Plateau that will need to be demolished and remediated. Ken clarified that the presentation is an overview, not a perspective from the State of Oregon.

Ken's presentation is provided as Attachment 1.

### *Historical Perspective on Inner Area Principles*

John Price, Ecology, provided a presentation on Central Plateau cleanup issues as addressed by the HAB and other public processes. He reviewed trends and significant issues tracked through the Board's advice to the TPA agencies. His presentation is provided as Attachment 2.

In addition to his presentation, John noted:

- The concept of the "Inner Area" has changed over time and is documented by different names and definitions. The number of Operable Units (OUs) has also changed over time; there were once as many as 32.
- The Comprehensive Land Use Plan Environmental Impact Statement defines 15 feet for cleanup depths, and is an important factor in cleanup conversations.
- The Model Toxic Control Act (MTCA) provides options for state cleanup levels, such as being able to choose from option A, B, or C.
- Waste characterization and groundwater compliance have been significant issues for the HAB, and there are numerous pieces of advice that demonstrate that focus.

### *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.*

C. The TPA agencies should continue to use the 2012 HAB Values document as a summary of the Board's previous positions and values.

Q. There are clearly some disconnects between our recommendations and what DOE resolves to do, so what is the value of bringing previous advice forward if there are already disconnects?

*R. [Ecology] It would be difficult to recreate all of this advice, so the purpose of the presentation was to demonstrate where there has been change and to help the Board explore that some more.*

C. Previous advice has asked DOE to clean up the Inner Area to as small an area as technically feasible, not leave it at just less than 10 square miles. It appears that Consortium for Risk Evaluation with Stakeholder Participation (CRESP) principles are already being implemented at Hanford, and I am uncomfortable with that.

Q. Can you clarify how assumptions for characterization inform interim actions and post-Record of Decision (ROD) cleanup?

*R. [EPA] That refers to the EPA's National Contingency Plan. We need to collect enough information pre-ROD to provide a basis for action on a waste site; if information is lacking it could lead to an interim action ROD and the information would be collected post-ROD*

Q. How does DOE decide when to do limited characterization?

*R. [EPA] Not collecting enough pre-ROD data can lead to an interim action ROD and EPA cautioned that DOE might not have enough information to make a final decision. It is not a preferred path but we need to provide an option for interim action should more technical work be necessary.*

Q. There is conflicting information about whether a tribal scenario will be used in the risk assessments. Will it be included?

*R. [Ecology] The Board has issued advice on using the tribal scenario, intruder scenario, and user scenario, which all three TPA agencies agreed with. But now DOE is proposing to not use a tribal scenario in the 200 Area.*

*[EPA] That is only a proposal, and if the Board feels strongly a tribal scenario should be used, now is the time to go on the record.*

C. The Board needs to further understand the definitions and differences between trenches, cribs, and ponds.

Q. What do we need to do now since it appears our previous advice is not actually influencing DOE?

*R. [Ecology] A lot of the advice has important standing even 20 years later, as we are having the same kind of cleanup discussions. The advice stands up well and is a testament to the Board's process.*

*[EPA] DOE believes they have compelling reasons to make the assumptions they have proposed, but the Board needs to decide whether they agree with those reasons and assumptions and go on the record if they don't.*

#### *EPA presentation*

Dennis provided an overview of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedial action process at Hanford. His presentation is provided as Attachment 3.

In addition to his presentation, Dennis noted that CERCLA process at Hanford started in 1992, and cleanup timelines have been pushed out as cleanup along the Columbia River has taken longer than anticipated. DOE is developing work plans for the 200 Area for EPA and Ecology to comment on; work plans lay out the work to be done through risk assessments and characterization, so Board advice on appropriate scenarios to help guide that work is appropriate at this time. The data collected through characterization informs the baseline risk assessment (BRA), which will become a proposed plan for the public to comment on. Dennis noted this is a four to six year process, and the result will need to be publically supportable. He acknowledged that the Board may feel their work and other publically supportable actions were not accepted by the TPA agencies, but they have more influence than they think.

Emy Laija, EPA, pointed out that the CERCLA Remedial Investigation and Feasibility Study (RI/FS) process has not started yet, so discussions are starting early for a multistep process.

### **Session One: Future Land Use/How Baseline Risk Assessments are Conducted**

#### *DOE presentation*

Jim Hansen, DOE-RL, provided a presentation on assumptions for Central Plateau cleanup and work plans. His presentation is provided as Attachment 4, and an accompanying TPA handout, "Central Plateau Approach to Cleanup Decisions," is provided as Attachment 5. Jim referenced both presentation and

handout throughout the remainder of the Central Plateau discussion. Jim spoke to one assumption at a time and paused for questions and comments before moving onto the next topic.

Jim explained the assumptions described on page three of the handout (Attachment 5).

Dennis noted that the National Remedy Review Board provided feedback that the default EPA standard should have been used on the River Corridor, which is why it is being used on the Central Plateau. BRAs on the River Corridor required supplemental information for each OU, so the TPA agencies are breaking down the work by OU and using more basic scenarios from the beginning on the Central Plateau.

#### *Board discussion*

*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 future land use of the Inner Area fit into the context of the sites around it? What forces the industrial use restriction, and what is the criteria?

C. Industrial use is acceptable, because no one will be drinking water from under that area, but end state criteria needs to be defined. The 10 square mile designation is acceptable as long as DOE agrees to go after contaminated hot spots, which would require deep well drilling.

Q. Some of the assumptions for Central Plateau assume that waste will be left in place in some areas, like the 200 West Burial Grounds, but those decisions have not been made yet. Waste should not be left in place, and removing waste adjacent to the Inner Area shrinks the remaining size.

*R. [DOE] Cleanup can be completed to many different levels based on multiple standards or scenarios, but the Inner Area should be industrial, because there will be areas within it that cannot meet a residential standard. Leaving waste in place is a possibility, but DOE is not presupposing those decisions or eliminating retrieve, treat, and dispose (RTD).*

*[EPA] While there may not be presupposed decisions, assumptions due appear to have a certain bias. If the HAB provides advice, it should address the industrial use designation.*

C. 10 square miles out of 586 is significant, and it is not worth the risk to workers to go after the waste under the Inner Area. Industrial use of the Inner Area means another federal activity could be ongoing on the site into the future to help remind the public of what was once there.

Q. Will there still be a buffer zone around the Inner Area that is not for residential use? A buffer zone may be required to provide transition between industrial and residential areas.

*R. [DOE] The TPA agencies have not discussed that scenario yet, as there are multiple contaminated ponds surrounding the Inner Area that may require additional restrictions.*

Q. When did the notion of a 15 foot buffer change to a 10 foot buffer?

*R. [DOE] State regulations provides flexibility for DOE to propose an alternative point of compliance. DOE wants to evaluate whether 10 feet is as protective as 15 feet, and if it is, it will be easier and less expensive to implement, as well as less hazardous for the workers.*

Q. How will protectiveness be measured?

*R. [DOE] That topic needs to be addressed in more detail, and additional justification is needed before making that determination.*

Q. If waste will flow downhill from the Central Plateau, how will a buffer zone protect that?

*R. [DOE] DOE agrees there are methods to be evaluated using empirical data and are aware of how things move; some contaminants move easier than others.*

Q. How do the assumptions equate to industrial standards under MTCA?

C. The Inner Area is supposed to be a simple site with few contaminants, under MTCA Level B, but the area will get progressively bigger if the assumption is to also not cleanup a buffer zone to residential use. DOE will not cleanup part of the River Corridor to residential use now because it will be part of the monument, so the non-residential use areas are getting bigger. The Yakama Nation does not accept a 10 square-mile Inner Area nor a buffer zone, because it is against tribal treaty rights. Cleanup levels should mean people can stand across the street from an industrial area and be safe.

Q. I agree with industrial use because it is practical, but how will DOE treat the Inner Area underground plumes?

*R. [EPA] The base assumption is that DOE will be successful at cleaning up deep vadose zone (dvz) contamination, which informs cleanup of Inner Area plumes.*

*[DOE] The goal for plumes toward the Columbia River is to restore groundwater to beneficial use within a reasonable timeframe, which DOE understands to mean human consumption. But the reasonable timeframe is difficult to determine without two final decisions for that area.*

C. There has been more movement in the dvz than anticipated, and the contaminants are moving to groundwater. Annual precipitation, climate, significant events, and long-term weather patterns need to be considered before assumptions can be based on successful cleanup in the dvz, because current cleanup is based on a static level of annual precipitation, and that is a fatal flaw.

C. A buffer zone should address three dimensions, not just two, because plumes cannot be cleaned up or avoided with just a fence. Rather than assuming certain feet of compliance, it should be a principle that DOE will go after the hot spots whether they are five or 20 feet below ground.

Q. Who regulates the 15 foot point of compliance?

*R. [EPA] EPA mandates that cleanup be protective of human health and the environment and comply with all laws; specific depths are not outlined.*

*[Ecology] Ecology looks at three zones of cleanup: the ground surface to whatever depth where humans can come into contact with contamination, the area of contamination, and groundwater. Each area requires a different level of cleanup. As an example, contamination between a 15 foot depth and the surface must be cleaned up to protect resources and people, and below 15 feet cleanup is required if it is needed to protect groundwater.*

*[DOE] MTCA identified six feet as an assumed ecological depth, and DOE is required to evaluate what depth will be adequate for providing protections of human health and the environment. DOE believes 10 feet is an adequate depth.*

C. A 10 foot point of compliance does not address the miles of pipelines under the OUs or hot spots. Characterization of smaller tanks will help DOE understand what was fed into the larger tanks and pipelines. If pipelines deteriorate in the future, waste will be exposed and change the conversation about containment. Further work can be done to make assumptions and the relevant decisions more sustainable.

Q. Will there be a comprehensive BRA in the future, or will the information remain broken down by OU? It is important to understand the cumulative results and risks.

*R. [DOE] Decisions are made by waste site, so risk is based on a defined scenario of exposure, regardless of the size of the site. BRA looks at the site's worst case scenario and exposure for remediation needs. To do a cumulative risk assessment, DOE would have to assume movement around the site including areas away from waste sites leading to an overall decrease in exposure levels, but they do not have a calculation for being able to do that at the surface. Determining overall risk for groundwater will be assessed in a separate process in the relative near term.*

C. Scenarios other than industrial should be examined to understand the broad potential for what could happen on site. Past HAB advice has asked for other scenarios, including tribal, to understand how resources will be affected. Tribal and residential scenarios should be assessed to provide DOE a defensible foundation. Conducting assessments on multiple scenarios now will cost less than in the future, and DOE cannot make predictions about which scenarios will occur down the road. DOE has a federal requirement to consult with the local tribes on how federal action will impact their resources.

C. Assumptions should explicitly state the time frame for the Inner Area so we know if this is expected in perpetuity, which is not acceptable. I hope we have a cultural paradigm shift in the future that will not settle for this level of cleanup, and we can use new technologies and standards to help do a better job.

Q. EPA guidance says exposures limited by institutional controls (ICs) may not be factored into BRAs. How will DOE accomplish that when industrial use implies the use of ICs?

*R. [DOE] DOE went through land use planning several years ago, identifying 25 miles of industrial use, of which 10 miles is the remainder. The initial decision under CERCLA identifies a reasonable future land use, and DOE's argument is that use is industrial. Industrial use dictates industrial cleanup.*

*[EPA] EPA requires the BRA be based on a reasonable maximum exposure scenario, which is a shift from how the local EPA staff interpreted the regulations for previous efforts. A shift is required to match how other national sites conduct BRAs. The standard industrial scenario is better understood than industrial exclusive, and EPA will hold DOE to the more protective industrial standard.*

Q. How does Benton County's land use plan factor into the industrial designation?

*R. [Ecology] Benton County adopted DOE's plan. To be able to manage waste in the Inner Area into the future requires an industrial designation. There is also good, clean habitat between the industrial sites. DOE has undergone a legal review concerning the designation and Ecology is comfortable with the decision.*

Q. How is the Inner Area defined – does it take into account movement beneath the surface? Major source points need to be evaluated for risk.

*R. [Ecology] The Inner Area has shrunk to 10 square miles based on the complexity of contamination near the surface, but it also considers the configuration of the sites there. The*

*groundwater moves constantly, and a standard point of compliance will need to be determined in order to meet drinking water standards.*

Q. DOE-Headquarters (HQ) has a history of not investing in what the HAB and local TPA agency offices want. How much will DOE-HQ allow for engagement on these principles, and is it worth the HAB's time?

*R. [EPA] That is the reality, but it could change in the future. It is worth the effort.*

*[DOE] DOE-HQ has been involved in the discussions so far but are not comfortable with everything we are working toward. It is hard to find a middle ground between DOE-RL, DOE-HQ, and the regulators.*

### **Session Two & Poster Session: How Sites are Characterized**

Jim explained the assumptions detailed on pages three -four of the handout (Attachment 5), and said characterization assumptions are based on lessons learned from the River Corridor, including to conduct more characterization in the beginning to provide a better understanding of contaminants of concern and necessary cleanup levels for protectiveness. RTD will still be used to clean up the waste sites. Jim said CERCLA only addresses waste sites, and the demolition and cleanup of facilities will be addressed in a different process.

Jim noted that the similar site approach will not be used if DOE is not convinced the sites are close enough for the same evaluation. He said DOE will not use the approach as much as initially thought. John said DOE has already conducted characterization on many of the Central Plateau waste sites, but there still is not enough data, so DOE will be going back for more. Initial characterization has helped to understand what characterization remains to be completed to inform the decisions.

#### *Board discussion*

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

C. The Board should weigh-in heavily in support of full characterization now, because there will be an increase in cost for doing more in the future. Historical documentation does not accurately or adequately describe the waste or its movement, so DOE should not rely on it. Data collection efforts should not be limited, as all data that can be collected should be considered in the decision process.

Q. How can DOE use an observational approach to arbitrarily decide when to stop using RTD if they do not fully know what contaminants are present or how they will behave?

*R. [DOE] That process will be specifically laid out in the work plans, as we know there is more need to understand what we are dealing with, unlike the River Corridor where we knew what we were dealing with.*

*[EPA] This issue requires further discussion, because the observational approach could lead to interim action RODs which is not what DOE wants.*

Q. Can DOE provide further explanation of the plug-in approach?

*R [DOE] It means new waste sites can be remediated using already approved cleanup actions or plans. We do not know what it applies to other than RTD because we want to understand the waste sites rather than use the plug-in approach.*

*[EPA] The plug-in approach would be hard to approve, from a regulatory standpoint.*

Q. How will the co-mingling of plumes be handled and managed?

*R [DOE] Calculations are done to meet the criteria and standards for groundwater below the waste site. DOE will need to consider comingling to determine contaminant sources under the industrial area. This concept has not been fully evaluated yet, but we think it would be vital. DOE will spend more time determining how to do waste site cleanup to protect groundwater.*

The Board broke into a 15-minute poster session before returning for session three.

### **Session Three: How Remedial Alternatives are Evaluated**

Jim explained the assumptions provided on page four of the handout (Attachment 5), noting that TPA regulators will ensure DOE evaluates groundwater for standard compliance, and any deviations will be additional. He said Hanford has received criticism for cleanup efforts above and beyond what is required, which will factor into the decision process.

Dennis said regulations could allow for the potentiality of digging up an engineered structure to its foundation at 15 feet, but leaving the large amount of contamination below it. He said there will be tough decisions on RTD sites where there is deeper, non-mobile contamination.

#### *Board discussion*

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

Q. How are plant roots, such as the sagebrush that has roots below 10 feet, being considered?

*R. [DOE] Based on examples from the Hanford Barrier and other similar locations, we have determined that the sagebrush at Hanford only has roots down about eight feet. Risk assessment guidance identifies we are to protect plant communities, not necessarily individual plants. DOE will need to show that an alternative depth will be protective of plant communities.*

Q. Why would DOE evaluate a conditional point of compliance, and how would that information be used? Why set a point of compliance x miles away from a plume if we know the plume will move at some point? DOE will have to deal with it eventually, so why not now?

*R. [EPA] Allowing the groundwater to move to a certain point will provide more dilution before having to retrieve the waste.*

*[DOE] Evaluation would consider how much groundwater is in the area, at what depth it is reached, and how much flows past the waste sites. A composite analysis will be used to consider areas beyond and between the waste sites. DOE will need to factor the cost of the pump and treat system in our decisions, as it is a costly system that will need to be replaced every 30 years. Drinking water standards will need to be met, it is just a determination of whether it is met at some distance or the site boundary.*

C. There is much disagreement to the point of compliance approach, both from the Board and its committees, as well as tribes. DOE should not spend money on something that is strongly objectionable. Moving the point of compliance further from the contamination could mean it is too late to contain the waste. An alternative point of compliance should not be considered or set until full characterization is completed.

*R. [DOE] Yes, reaching the edge of a compliance point set for groundwater or the dvz is too late, and DOE can make sure we address those concerns through this process.*

Q. Is there a decision matrix for determining whether or not to do characterization or whether or not to retrieve past a certain depth? What drives characterization below 15 feet?

*R. [EPA] There is not a matrix; it is based on professional judgment. Even with the observational approach, data needs to be collected, but it is cheaper to dig some sites up than to do the characterization that would decide whether to dig it up or not*

*[DOE] The observational approach was less expensive on the River Corridor, which was relatively simple compared to the Central Plateau. It is better to make a decision and clean up as we go [in the River Corridor], and the observational approach allows us to chase the contamination further if we need to rather than cap it at a certain depth. Characterization below 15 feet is determined by the potential for risk to groundwater.*

Q. What does “engineering structure of mass contamination” mean for cleanup levels?

*R. [EPA] On the River Corridor, many waste sites had chromium so we cleaned up the sites until it was gone, but that is not a requirement for under the structures on the Central Plateau. Adding language into the work plans and RODs that will allow us to talk about going further under structures than required is necessary to allow discussions about the best option down the road, rather than stop at the requirement. The document should articulate the ability to go above and beyond if necessary, and to be able to collect the necessary data to inform that decision.*

C. Regulations need to be flexible, not stringent. Setting a specific depth at 10 or 15 feet is too restrictive for an area with such variability. Board advice should request that the TPA agencies look into any technologies that could assist with cleanup below the 15 foot threshold in order to accommodate deeper waste retrieval or treatment.

Q. How do the implications of the Fiscal Year (FY) 2016 Presidential Budget affect the assumptions and work plans?

*R. The work plans and the work associated with them will not be affected in the near term, as they are a 10-15 year project.*

#### **Session Four: How Cleanup Levels are Determined**

Jim reviewed the assumptions for how cleanup levels are determined, found on page five of the handout (Attachment 5).

*Board discussion*

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

Q. How do the assumptions account for uncertainty of what is in the tanks?

*R. [DOE] EPA outlines procedures to use that includes a broad look at chemistry and organics through the characterization process. It is a complicated process that can be further explained in committee.*

Q. Will effects to plants and animals be examined the same way as the River Corridor? How do the assumptions treat Threatened and Endangered Species (TES)?

*R. [Ecology] DOE will use the same methodology but collect new data.*

*[DOE] DOE will use the same cleanup levels for eco-receptors as we did on the River Corridor. For example, we know that a Robin and a Meadowlark are similar in what they eat and drink, so we can use one species' data to calculate for the other. Some of the information can be grouped together. Threatened or endangered species are not present on the Central Plateau, but DOE does assess Threatened or endangered species exposure risk on the River Corridor.*

C. The River and Plateau (RAP) and the Public Involvement and Communications committees (PIC) can help the agencies work on communicating the technical jargon associated with the assumptions and work plans to the public.

Q. How confident is DOE that you can establish risk associated with each chemical on the Central Plateau?

*R. [DOE] DOE will look at a broad sweep of chemicals and apply process knowledge to create a suite of analysis. The process does help identify where we do not have enough information on the organics, and we build that uncertainty into our planning.*

*[Ecology] Most of the time the TPA agencies are confident in the chemical and the amount of it, but not where it went. If there are five different cribs, we are not sure which crib received which amount.*

C. Ecological studies were not available for public review, and the Yakama Nation disagrees with how the studies were conducted. The public needs a better understanding of how ecological data was collected and is being used. Modeling should look at unrestricted use and include irrigation.

*R. [EPA] Sensitivity studies can provide the same information as an irrigation scenario.*

Q. How does the plug-in approach apply to individual waste sites?

*R. [DOE] The plug-in approach can only be used when significant characterization has been completed and when the sites are right next to each other, with similar conditions.*

*[EPA] It is difficult to use the plug-in approach for final RODs.*

*Wrap up and next steps*

The Board discussed avenues for the information gleaned from the discussion, including providing advice for the June Board meeting, which the TPA agencies confirmed is an appropriate time.

John said the regulators want to hear from the Board to decide whether the work plans, three in total, should be approved.

Jim clarified that work plans have not been provided to the regulators for comment yet, and the BRAs will not be conducted until the necessary data is collected. Work plans are divided by topic and address burial grounds, the dvz, and pipelines.

### **Public Comment**

#### *Day One*

Mike Luzzo said DOE's plan does not address Native Americans and does not provide proof that cleanup is reaching the groundwater. He said there is a safety culture problem at the Hanford Site, and DOE should not be exempted from regular safety standards like Occupational Safety and Health Administration, which provides guidelines for lost time prevention. Mike said the public has had the opportunity to comment on single-shell (SST) and double-shell tanks (DST), but not the waste that is getting mixed into new tanks. Mike asked if the authors of the TVAT Report would be willing to stand behind their findings, and if not, then the TVAT Report is discredited. An outside agency should look into work at Hanford. There are many studies available about Hanford to help inform the medical and worker's compensation process.

James Fluharty, Hanford employee for 25 years, spoke to worker safety issues and recent exposures, noting that both have been issues for more than 10 years. He said workers do not know the health facts of tank farm vapors, and that studies of long-term effects are needed to inform the worker what they may be dealing with in the future. He said workers want to get back to work; they do not want to be sick at home, but they are concerned about what will affect them in the future. James said his understanding is that the studies are 10 years away from being able to understand what has occurred. He asked DOE to provide trainings on chemical exposures, just as they did for radiation exposure, and to give exposed workers the leeway to deal with that they may be experiencing.

#### *Day Two*

Mike Luzzo said he has spoken before the Board before, and the last time was to ask for sampling of old tanks. High-level waste (HLW) is a big issue for the tanks, and some of the underground storage tanks should have been removed already. Mike asked if Hanford has received information from the U.S. Air Force on quantifying worker exposures and industrial hygiene. He said that if the Board is not working with medical experts, work on tank vapors is worthless. He encouraged the TPA agencies to make a final decision about cleanup, because the issues have been around too long.

James Fluharty said that in addition to long-term health studies, workers on site would like to see an investment in studies about dome space tank vapors, because short term exposures have been reported there. There are also short term exposures from tanks with active ventilation that many workers do not report. Chemicals are tested 30 minutes after a reported exposure, so they may not be accurate, and what was emitting may have stopped by the time the test is taken, leading to disbelief of exposure. It is important to go to the source and take samples of the same space to know what is present before there is an exposure.

Katherine Van Dyke said she was a welding inspector for 12 years at Hanford and was exposed to emittance from the stacks at Tank Farms. She has since experienced severe health problems, including lung nodules and neuropathy in both arms. Katherine said she deals with her health problems openly, honestly, and patiently so others can understand how she is impacted every day. She misses her work on site, and she was once able to be a financial provider for her family, but now she cannot. In order to receive appropriate disability, the Department of Labor says Katherine needs a doctor to diagnose her problems as resulting from beryllium, but doctors do not know enough about the chemicals and hazards at Hanford to be able to do so. Katherine said her husband still works at Tank Farms, and she came to the meeting to represent those still being exposed today.

Jeff thanked the public for participating in the meeting and providing comments. He appreciates the Board raising the issue, and he knows vapor issues deserves more attention and discussion. DOE is taking the issue seriously.

### **Tri-Party Agreement Agencies – Program Updates**

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

Doug Shoop, DOE-RL, provided an update on activities under DOE-RL. His presentation is provided as Attachment 6. In addition to his presentation, Doug noted:

- The FY 2016 Presidential Budget was released earlier in the week, and DOE is working to determine what it means for activities on site. The budget reduces the amount of funding for the River Corridor and community and regulator support, so DOE will need to continue to look for efficiencies.
- Safety culture is a priority for Hanford, including limiting the number of distractions for employees that lead to mistakes. Distractions include concerns about the jobs environment, and DOE is working to settle concerns.
- Safety events prevent milestones from being completed on time, but stop work occasions are sometimes necessary to protect employees. DOE may be delayed in completing the 2016 milestone for the Plutonium Finishing Plant (PFP) if there are more delays for the workforce.
- DOE is working on methods to incentivize trained PFP workers to remain on the project through completion to increase safety.
- Two bore holes are being used at the K East Reactor, one to train workers before the second that will look at the higher contamination area.
- The FY 2016 budget provides funding for the sludge process at K Basin, and a lot of prep work will be done in 2015 to get ready for next year's work, including training, appropriate documentation, and a readiness assessment.
- As PFP is demolished, all waste, excluding Transuranic Waste (TRU), will be sent to the Environmental Restoration Disposal Facility (ERDF). The Board is responsible for helping DOE enable in-trench macro-encapsulation technology at ERDF, which provides greater protection for the workers, the public, and the environment.
- Hexavalent chromium levels in the 100 D Area are decreasing after DOE went an additional 10 feet to capture it. This provides a cost savings, as 200 West Pump and Treat will not need to be in service as long.
- DOE is working with contractors to determine which vertical pipe units (VPU) in the 618-10 Burial Ground should be remediated to accommodate complete drum remediation in 2015. DOE will continue to chase plumes in the area and remediate the soil until cleanup levels are attained.

- Congress recently designated the Manhattan Project as a national park, and DOE looks forward to working with the other agencies to determine roles and responsibilities for management of the park.

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

J.D. Dowell, DOE-ORP, provided an overview of recent accomplishments at DOE-ORP. His presentation is provided as Attachment 7. In addition to his presentation, J.D. noted:

- The FY 2016 Presidential Budget provides \$1.414 billion for the Waste Treatment Plant (WTP) and for planning for future operations at Tank Farms. The lower-than-requested funding in FY 2015 delayed issue resolution on WTP, and DOE is working to catch up.
- Cleanup of the A/AX Farm will begin in March in compliance with the TPA milestone. The design for cleanup of A/AX Farm is 60 percent complete and on schedule. Lessons learned at C Farm will be applied to A/AX Farm, including putting all necessary infrastructure in place from the beginning.
- The C-111 tank in C Farm is the next reasonably achievable tank for completion in FY 2015. Vapor issues have slowed work at both C and A/AX Farms as workers are taking additional precautions. The delay in progress may affect cost and schedule.
- AY-102 continues to be monitored on a regular basis. December monitoring showed larger puddles under several leaks than expected, but it does not affect human health or the environment because the leak is between the SST and the DST. Retrieval of the leaking waste will begin on March 4, 2016, unless schedule is further impacted by vapor issues.
- DOE-ORP has started implementing 27 of 47 significant recommendations identified in the TVAT Report, and the impending implementation plan addresses all 47 recommendations. The plan will be shared later in the month. Implemented protections will cost millions of dollars per month, but DOE is committed to seeing it through.
- DOE-ORP is hosting a tank vapors fair February 24-25 to look for new technologies to resolve vapor issues.
- There are 20 support facilities on the WTP complex; all are on track and ahead of schedule for completion.
- The Low Activity Waste (LAW) Facility and Analytical Laboratory are slated for completion in FY 2015.
- The HLW Facility and Pretreatment Facility (PT) have received approval for 2015-2016 interim action work plans after completing the safety design process. Remaining technical issues are resolvable and built into the design process. Full-scale vessel testing and pulse-jet mixing at PT will continue to demonstrate efficacy and that the facility meets design criteria. PT is fully funded and work will proceed, while construction on the HLW Facility is on hold until all technical issues are resolved.
- The LAW Pretreatment System is a \$354 million project that acts as a filtering system for sending waste to the LAW Facility. Design and construction processes will begin in FY 2015. DOE-ORP is working with DOE-HQ on project management details to demonstrate robustness and provide oversight of the technologies and readiness tests.

*Washington State Department of Ecology*

Jane Hedges, Ecology, provided a presentation on recent activities at Ecology. Her presentation is provided as Attachment 8. In addition to her presentation, Jane noted:

- Ecology recently took a tour to see deep remediation digs in the 100 D Area. DOE-RL worked hard to convince DOE-HQ to dig deeper in that area, and the difference is tremendous. Contamination levels are going down.
- The TPA public involvement survey closes on February 6. Jane encouraged Board members and their constituencies to participate to help the TPA agencies know what is effective and what should change.
- The Ecology traveling display has been on display in many local high schools and colleges. Jane encouraged Board members to contact Dieter Bohrmann, Ecology, if they are interested in having the display for their organization to display.

#### *U.S. Environmental Protection Agency*

Dennis Faulk, EPA, reviewed recent accomplishments and upcoming activities for EPA, including:

- EPA recently attended a meeting of the National Remedy Review Board, per HAB's recommendations.
- Full funding for K Basin means the TPA agencies will need to work together to determine a schedule for moving forward, and EPA looks forward to resolving that dispute. Though K Basin is fully funded, some projects in the River Corridor received less funding for FY 2016 and that could mean a delay for the 618-11 Burial Ground and 324 Building, both of which have milestones due in 2018. EPA will continue to encourage DOE managers to try to fund DOE-RL at the level needed to complete the work.
- The ERDF waiver is stuck at EPA headquarters. Each agency supports the waiver but are currently working through issue resolution.
- The EPA Hanford Project Office will be moving to the Federal Building on March 12. Their offices will be in a publically accessible space on the second floor. EPA can try to arrange use of the second floor conference room for Board committee use when needed.
- Work in the Hanford Project Office is also changing as new employees and new projects fall under their prevue. Dennis noted it is a good opportunity to leverage resources and streamline work efforts.
- In addition to the review of Hanford, CRESA has been charged with reviewing DOE's work at a national level, and Dennis is uncomfortable with how the report may be used. If their work is designed to look at inconsistencies across the DOE complex, they will find many, as cleanup is different at every site, and it should be.

#### *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 long will resolution actions for the Consent Decree continue?

*R. [DOE] DOE and Ecology arguments on the Consent Decree will be presented on February 19, in Richland. The two proposals are available publically, and the agencies agree that work should continue on direct feed LAW. Further details on negotiations are not being disclosed at this time.*

Q. Has any groundwater been sent from the East Area to the 200 West Pump and Treat for treatment?

*R. [DOE] DOE is looking into putting a pipeline above ground between the 200 East and 200 West areas to move perched water to the 200 West Pump and Treat system. DOE can provide a visual on what that might look like in the near future.*

C. During the initial design phase, many studies and concepts were eliminated for consideration in the HLW Facility. But now that design and construction have been stalled, now is a good time to reconsider options that may still be of value to ensure the correct technologies are in place.

*R. [DOE] DOE can take that idea into consideration, but there is not a lot of room for changes to the existing design.*

Q. Why is HLW being stored at T Plant?

*R. [DOE] The Treatment Plant stores sludge from K Basin, which is TRU waste which will ultimately be treated and sent to the Waste Isolation Pilot Plant (WIPP).*

Q. How and where will DOE dispose of the grouted ventilation system and hot cells being used at Waste Encapsulation Storage Facility (WESF)?

*R. [DOE] The ventilation upgrade plan is available for public comment. The process provides for grouting all but one of the hot cells to prevent any potential hazards from being released. The hazards would be fixed in place and prevented from releasing to workers or the public. Ultimately, there will be a disposition path for WESF and B Canyon as part of the overall closure plan for the area.*

Q. How much work can be completed at the 324 Facility given budget restraints in FY 2015 and 2016?

*R. [DOE] Design of the 324 Facility will be 90 percent complete by the end of FY 2015. A mock-up of the facilities will be set up in a non-contaminated area for testing. DOE is hoping for additional FY 2016 funding in the final budget. If the budget remains as projected, DOE will work with the regulators to prioritize projects.*

Q. How will Ecology recognize necessary changes to milestones at Tank Farms given the extra precautionary measures being taken for safety?

*R. [Ecology] Ecology is aware of the work limitations due to safety; the milestone for tank retrieval gives DOE the ability to ask for an extension based on safety issues.*

Q. Will implementation of the TVAT Report recommendations include looking into long-term health effects?

*R. [DOE] DOE has a responsibility to its workers, but we have not looked into an assessment of long-term effects or linking causal effects of exposure to long-term illness yet. The TVAT Report team did not have the necessary medical representation to include that as a recommendation.*

*[DOE] DOE has medical groups and contractors that provide various reviews and studies about work on site, but DOE will take the Board's advice into consideration for finding a better path forward.*

Q. What will be accomplished at the February 11 CRESPP meeting, what kind of product are they preparing, and what is the source of their funding?

*R. [DOE] Hanford management is involved in the CRESPP process. The study was commissioned by the Undersecretary of Energy to evaluate the work left to do on site from a risk perspective. CRESPP characterizes risk and categorizes it. The February 11 meeting will go over comments received on their draft product and demonstrate how they were incorporated. CRESPP will*

*produce an interim report in the spring to demonstrate their methodology and show how it applies to a certain number of units on site. The interim report will be presented to tribes and the public. There is not enough funding to complete all the work on site, and CRESP will help identify the most important projects to complete to ensure protection of the community and the environment.*

C. Hanford risk is being prioritized by people who do not live in the community, nor do they have a complete understanding of the history or priorities of Hanford. Resources could be better spent if DOE has not decided how or even if this product will be used. CRESP processes include stakeholder participation, but Hanford entities were not given an opportunity to engage.

Q. How will the two different flow models between Tank Farms and WTP work? Tank Farms is operated under one set of design rules, and WTP another. Leadership needs to standardize models and incorporate new research.

*R. [DOE] DOE will look into the code of record between the different projects to ensure they are aligned.*

C. Integrated Safety Management (ISM) provide opportunities for sharing monthly findings and providing feedback in a loop process. DOE needs to better implement ISM to share recent findings.

Q. What kind of remediation is being conducted at the B Reactor?

*R. [DOE] The B and C Reactor Area has been well remediated. The ancillary facilities have been demolished and BC Area remediation is mostly complete, so the only ongoing work at the B Reactor is for surveillance and maintenance. Remediation under B Reactor is not necessary because it did not leak like the K Reactor basins did.*

Q. How will ongoing work to close tanks be incorporated into the closure permit, and when will the Board see the next draft?

*R. [Ecology] A date is not set for release of the next draft, but Revision 8C is currently in effect. SST closure is conducted under that version. Milestones are in place for various closure activities as part of the Federal Facility Closure Act.*

## **Board and Committee Reports**

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

Richard Bloom, HSEP vice-chair, recognized committee members and noted that the committee has been busy working on Tank Farm vapor issues and advice, as well as following up on the beryllium and employee concerns programs. At their March meeting, HSEP will join the Tank Waste Committee (TWC) to review how the TVAT Report has been implemented, and will explore the option of a radiological-primer as an evening session at the April Board meeting. HSEP will have a conference call in February.

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

Jerry Peltier, BCC chair, spoke to the purpose of BCC and the need to provide meaningful advice on the site's budget. He suggested a Committee-of-the-Whole (COTW) for DOE's budget rollout, after which Board members can submit their individual concerns to be considered for draft advice. Jerry said advice

could be ready for the June Board meeting. He noted the need for major renegotiations of the Hanford budget, as each year it gets cut and work must be deferred. BCC will only provide advice on the 2015 Lifecycle Scope, Cost, and Schedule Report (Lifecycle Report) if there are significant changes.

Jerry has already provided written comments on the President's budget and distributed them to the BCC, which was a slight increase from the previous year and the first time there has been an increase since the beginning of the recession. Steve noted that the budget item that funds HAB has been cut by \$5 million in 2015; that information should be factored into decisions about hosting a COTW. Shelley suggested DOE host a budget rollout meeting rather than one funded by HAB. DOE's budget will be available in March.

#### *Public Involvement and Communications Committee (PIC)*

Liz Mattson, PIC chair, recognized committee members and said they anticipate holding a meeting prior to the April 7-8 Board meeting. The meeting could be longer than normal to make up for missing a meeting in February. PIC will have a call on February 18 to discuss April meeting agenda topics. DOE has asked PIC to provide input on a public communication strategy for the WTP, and PIC will likely hear from the TPA agencies on the results of the public involvement survey. The TPA agencies may also hold a TPA Quarterly Update on public involvement activities.

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

Pam Larsen, RAP chair, said the committee recently updated their committee work plan and re-drafted their March meeting agenda, based on feedback from the TPA agencies. The March RAP meeting will follow up on Inner Area principles as discussed during the Board meeting. Issue managers will begin working to provide advice for the June Board meeting. RAP will also receive a briefing on what DOE-RL cleanup activities can be accomplished given budget constraints, as well as potentially address the Lifecycle Report and the status of PFP. RAP is working to complete a response letter to DOE and EPA on the 100 F Area advice.

#### *Tank Waste Committee (TWC)*

Bob Suyama, TWC vice-chair, said the committee has been working on their 2015 work plan and will be tracking four issues in the near term: safety culture improvements including Tank Farm vapors, risk-based retrieval, treatment and closure for Waste Area C; direct feed issues, including removing cesium during pretreatment, before direct-feed LAW, and then returning it to the tanks; and, WTP communications strategy and work plan progress. TWC has received initial briefings on all topics and will address the next steps during their conference call on February 11. The committee will also discuss cesium storage work plans and the design and operability study related to direct-feed LAW.

Bob said TWC chair Dirk Dunning has indicated his desire to step down from TWC leadership; Bob asked for nominations for his replacement.

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

Steve said the working relationship between the TPA agencies and the EIC has changed due to the work planning process. He said issue managers are more closely linked with agency project managers now, which provides for better topic coverage, but also requires the EIC to outline a communication strategy and provide expectations for how the relationships will work into the future. The EIC will also be discussing how to accommodate advice that is more involved and complex than before. Other topics to address include committee efficiencies, student membership, and the place for Board open forums.

#### *National Liaison*

Shelley said she recently learned that the WIPP will reopen in 2016, but other reports indicate 2018 due to the amount of work required to become operational again. The Savannah River site is still prevented from sending their waste to WIPP, which is worrisome for Hanford as they are last in line for shipping to WIPP.

Steve indicated that the delay will, in part, cause Savannah River to push out their site closure date to at least 2065, costing an additional \$25 billion.

#### *Environmental Management Site-Specific Advisory Board (EMSSAB)*

Susan said the EMSSAB has an upcoming conference call to plan the agenda for the April meeting in Georgia, where the chairs will tour the Savannah River site. She said other boards are more concerned about WIPP than HAB is at this point. Susan reminded the Board that details of EMSSAB are provided on the DOE website, including past presentations, meeting updates, and topics addressed at the national level. In the upcoming months, the EMSSAB will reconsider their last piece of advice, which was not passed by some of the individual boards, including HAB. Susan requested that Board members provide she or Steve with any topics they think need to be addressed at the national level.

Steve noted the Georgia EMSSAB meeting will be held April 21-23. He asked Board members to let him know what he should share on their behalf. One Board member asked that he address the CRESP Report and the Board's discomfort with the review and impacts to Hanford.

One Board member asked if the EMSSAB looks at cultural resource impacts complex wide. Susan said the EMSSAB has discussed cultural resource issues but not from a total perspective. She will bring the topic forward for further discussion. Jane noted that DOE-HQ has a state and tribal government working group that addresses tribal and state issues pertaining to the sites; their information is available on DOE's website.

#### **Debrief of Central Plateau Inner Area Principles**

Dale Engstrom, ODOE (State of Oregon), compiled a list of questions and comments identified during the previous day's Central Plateau discussion, provided as Attachment 9. He reviewed the list and noted where there was significant agreement. One item not on the list relates to the issue of going after hot spots for remediation or stopping at 15 feet. Dale quoted the comment, "institutional memory maintains currency," noting that it is important to remember past problems on site to help drive cleanup and funding.

Shelley said the list of questions and comments will go back to committee for further consideration as potential advice points. She said the advice should provide compelling evidence for what they advise.

The Board reviewed the list to identify any missing points and to provide clarification. Additional thoughts or concerns include:

- Raising some concerns to a policy or legal discussion, including the exclusion of a tribal scenario even though DOE has a legal requirement to consult with the tribes on impacts to their resources into the future. One Board member noted that DOE does not have the right to interpret tribal treaty rights.
- Confusion between principles and assumptions, and what should be put forward for work plans, as assumptions sound like decisions have been pre-determined.
- The overarching theme of risk-cost analysis.
- Advising DOE to conduct sensitivity tests.

- Clarifying how assumptions fit into the Resource Conservation and Recovery Act permit process.

Dennis said EPA can attend the March RAP meeting to work towards answering the Board's lingering questions. He noted that everything outlined by DOE-RL aligns with direction from DOE-HQ, and their proposals are fully within the regulations. Requesting that DOE go above and beyond their regulations will require substantial justification. Jeff said the Board needs to consider the reason "why" different assumptions or actions are required.

The Board discussed the format of the Central Plateau cleanup discussion. Everyone voiced tremendous support for the format that allowed the full Board an opportunity to learn, participate in, and have a dialogue about an issue that will concern the Board for years to come. One suggestion included providing more time for the poster sessions, or consider dropping the poster session if there is not enough time to appreciate the hard work and money that goes into producing them. The Board appreciated the TPA agencies' willingness to engage openly and honestly. The handout was especially helpful for breaking down the information, and the Board felt it would be a good reference material for the public.

Jeff thanked the Board for their constructive participation, noting the respectful dialogue.

### **Board Business**

#### *Adopt HAB Work Plan*

Steve said the Board has been working through an interim work plan for the first quarter of FY 2015. The EIC worked to identify committee tasks for the second and third quarter of FY 2015, and the work plan is now ready for Board adoption.

Cathy reviewed the format of the work plan and tasks identified by committee. Topics are divided by quarters and have a DOE project manager assigned to assist the Board, which makes it easier to plan committee meetings, as agency representatives have committed to be there. The Board work plan feeds into the committee three month work plans. EnviroIssues will conduct a review later in the year to identify six-month accomplishments, in order to ensure the Board is addressing what the agencies have requested.

The Board discussed using SharePoint to access the work plan and other documents.

The work plan was adopted.

#### *Board FY 2014 Annual Report*

Cathy presented and previewed the recently completed FY 2014 HAB Annual Report, developed by EnviroIssues, in conjunction with the TPA agencies. The Annual Report reflects the Board's work, accomplishments, issues, and celebrates its 20 year anniversary. It will be posted to the Hanford website, and Cathy encouraged the Board to share it with the public. Further print publication is yet to be determined.

#### *Preliminary April Board meeting topics*

Cathy reviewed the following tentative meeting topics for the April 2015 Board meeting:

- Agency reports
- Committee reports

- 100 F draft response letter
- Public Involvement survey results
- Radiological-101 primer evening tutorial
- Update on the ERDF waiver
- Central Plateau assumptions/principles update (tentative)
- FY 2016 HAB budget

*Board procedural issues*

Dennis noted that public comment seemed to be a challenge during the Board meeting, and he asked the HAB to consider engaging members of the public in a broader sense during the meetings. He said the Board has struggled with how to do public comment, but there are other ways to be more responsive and flexible with their participation.

*Closing remarks*

Steve thanked Board members for their participation. The meeting was adjourned.

## **Attachments**

**Attachment 1:** Overview of the Central Plateau presentation

**Attachment 2:** Historical Perspectives on Inner Area Principles presentation

**Attachment 3:** CERCLA Overview presentation

**Attachment 4:** Central Plateau Approach to Cleanup Decisions presentation

**Attachment 5:** Central Plateau Approach to Cleanup Decisions handout

**Attachment 6:** DOE-RL agency update presentation

**Attachment 7:** DOE-ORP agency update presentation

**Attachment 8:** Ecology agency update presentation

**Attachment 9:** Central Plateau Follow-up Comments/Questions

**Attendees**

**HAB MEMBERS AND ALTERNATES**

Gabe Bohnee, Member	Maynard Plahuta, Member	Larry Lockrem, Alternate
Janice Catrell, Member	Mecal Seppalainen, Member (phone)	Jonathan Matthews, Alternate
Shelley Cimon, Member	Bob Suyama, Member	Liz Mattson, Alternate
Sam Dechter, Member	Art Tackett, Member	John Martell, Alternate
Robert Davis, Member	Gene Van Liew, Member	Peggy Maze Johnson, Alternate
Earl Fordham, Member		Kristen McNall, Alternate
Gary Garnant, Member	Richard Bloom, Alternate	Rudy Mendoza, Alternate
Alissa Cordner, Member	Al Boldt, Alternate	Emmett Moore, Alternate
Floyd Hodges, Member	Eric Clements, Alternate	Edward Pacheco, Alternate
Steve Hudson, Member	Shannon Cram, Alternate (phone)	Mike Priddy, Alternate
Pam Larsen, Member	Dirk Dunning, Alternate (phone)	Dan Serres, Alternate
Susan Leckband, Member	Dale Engstrom, Alternate	Richard Smith, Alternate
Melanie Myers-Magnuson, Member	Jeff Hunter, Alternate	Margery Swint, Alternate
Ken Niles, Member	Paige Knight, Alternate	Jean Vanni, Alternate
Bob Parks, Member	Mike Korenko, Alternate	Steve White, Alternate
Jerry Peltier, Member		

**AGENCY, CONTRACTOR, AND SUPPORT STAFF**

Jeff Frey, DOE-RL	Dieter Bohrman, Ecology	Sharon Braswell, Northwind/DOE-ORP
Jim Hansen, DOE-RL	Madeleine Brown, Ecology	Michelle Searls, Northwind/DOE-ORP
Karen Lutz, DOE-RL	Jane Hedges, Ecology	Carolyn Noonan, MSA

Doug Shoop, DOE-RL	Sandy Rock, Hanford Occupational Health Services (phone)	Jennifer Copeland, MSA
Kristen Skopect, DOE-RL	Mark Triplets, PNNL	Steve Beehler, Northwind/DOE-ORP
Alex Teimouri, DOE-RL	Rod Skeen, PNNL (phone)	Rob Piippo, MSA
John Sands, DOE-RL	Mark Freshley, PNNL	Michael Turner, MSA-TPA
JD Dowell, DOE-ORP	Don Moak, WCH	Rae Weil, MSA
Joni Grindstaff, DOE-ORP	Tammie Gilley, EnviroIssues	Sonya Johnson, CHPRC
Dennis Faulk, EPA	Cathy McCague, EnviroIssues	Noah Cruz, CHPRC
Emy Laija, EPA	Melissa Thom, EnviroIssues	

**MEMBERS OF THE PUBLIC**

Emily Bays, Hanford Challenge	James Fluharty	Alan Nagarahi, CTUIR
Don Bouchey	Tom Galioto	Chrissy Swartz, Heart of America Northwest
Annette Cary, Tri-City Herald	Mike Luzzo	Katherine Van Dyke
Abigail Cermak (phone)	John Marshall (phone)	Ming Zhu (phone)
Pedro Delatoure	Patrick Mills (phone)	