

FINAL MEETING SUMMARY

HANFORD ADVISORY BOARD

November 5-6, 2014

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 the In-trench Macroencapsulation of Waste at the Environmental Restoration Disposal Facility.

Board Business

The Board approved one letter regarding the Consortium for Risk Evaluation in Stakeholder Participation Methodology for the Hanford Site-wide Risk Review Process. The Board also identified potential topics for the February Board meeting and recommended Steve Hudson for the position of Board Chair and selected the Board Vice Chair, and National Liaison. The River and Plateau and Tank Waste committees will meet in November 2014.

Presentations and Updates

The Board heard presentations on:

- Tri-Party Agreement agency Annual Reports
- An overview of Central Plateau Cleanup Inner Area Principles
- 2014 Board Accomplishments and Board committee reports

Public comment

No public comment was provided.

HANFORD ADVISORY BOARD
November 5-6, 2014 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

Steve welcomed everyone to the meeting, and he formally introduced nine new Board members and alternates.

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).

Cathy McCague, EnviroIssues Facilitator, reviewed the meeting agenda and objectives. Cathy reminded Board members that leadership positions would be voted on at the meeting, and that each Board seat could cast a single vote for each leadership position.

Susan Leckband, Washington League of Women Voters and Board Vice Chair, recognized that the Board's 20-year anniversary was being celebrated in Richland following the Board meeting, and she encouraged all Board members to attend. She praised fellow Board members, both past and present, for their generous support of the event throughout the planning process.

Ken Niles, Oregon Department of Energy (ODOE), noted that the ODOE *Hanford Cleanup* text had recently been updated. The 25 Year edition was available for Board members. Ken also identified that the State of Oregon had released letters on both the draft Consortium for Risk Evaluation and Stakeholder Participation (CRESP) and the Central Plateau Cleanup Inner Area Principles. These comments were available for those interested.

Steve reminded the Board that the meeting would include a vote on an Environmental Management Site-Specific Advisory Board (EM SSAB) Chairs' Recommendation letter. He noted that the HAB usually rejects such letters due to factual inaccuracies that are included within them. Steve noted that the Board was now allowed to change factual errors that do not change the tenor of the document, and he encouraged Board members to note any of these factual changes during the Board's discussion of the letter.

Steve confirmed adoption of the September Board meeting summary.

Tri-Party Agreement Agencies – Annual Reports

U.S. Department of Energy – Richland Operations Office

Doug Shoop, DOE-RL, began his annual report presentation (provided as Attachment 1) by congratulating the HAB on 20 years of important work. He recognized that the Board's efforts and advice have made Hanford cleanup efforts more robust, and he stated that the Board has been particularly impactful with regard to stabilizing plutonium at the Plutonium Finishing Plant (PFP), remediating groundwater, cocooning C Reactor, establishing B Reactor as a National Historic Landmark, and remediating the 300 Area. Doug noted the following main points in his look-back:

- In the past, 450 billion gallons of groundwater were discharged to the environment and drove contamination into the vadose zone. Thanks to past HAB advice, 2,000 wells are in currently operating around the site, 11 billion gallons of contaminated groundwater have been treated, and 130 tons of contaminants have been removed. Two billion gallons of groundwater are being treated every year, and DOE expects that amount to increase in the future. There has also been a noted decrease in hexavalent chromium in groundwater along the River Corridor.
- Without the support of the HAB and the overall community, the B Reactor would likely have been placed into interim safe storage along with the other reactors along the River Corridor. DOE recently celebrated the 70th Anniversary of that facility, and the tours that DOE offers to B Reactor are very popular.
- The vast majority of buildings in the 300 Area have been removed, and a majority of the waste sites have been remediated.
- ERDF has been a boon to Hanford cleanup effort. HAB advice recommending expansion of the facility was helpful to the Hanford Site cleanup mission. To date, 16 million tons of low-level waste have been disposed at the facility.

Looking ahead to Fiscal Year (FY) 2015 and beyond, Doug noted that DOE-RL's overall goals moving forward with cleanup involve moving buried waste and contaminated soil away from the Columbia River, continuing groundwater treatment, deactivating and decommissioning facilities, and containing contamination on the Central Plateau. Doug noted the following main points in his progress update:

- A vast majority of DOE-RL's FY 2014 Key Performance Goals were completed; DOE will share Key Performance Goals for FY 2015 as those become available.
- DOE-RL spends approximately \$500 million per year on maintaining safe, secure, and compliant activities, facilities, and operations at the Hanford Site. The agency is continually working to drive these costs down and accomplish more cleanup while remaining mindful of infrastructure and maintenance.
- DOE-RL is optimistic that the PFP can be reduced to slab-on-grade by the 2016 Tri-Party Agreement (TPA) milestone; however, it is most important that DOE continues to make progress on safe demolition at this complex site. The most difficult demolition activities still remain.

Today, 63 of the 81 facilities at the PFP have been demolished, 201 of 238 gloveboxes on site have been dispositioned, and 142 out of 196 pencil tank units have been addressed.

- DOE-RL will continue to focus on groundwater pump and treat operations. The 200 West Pump and Treat facility will soon be outfitted to treat uranium—this will allow for less-expensive treatment of uranium-contaminated perched water.
- At the 618-10 burial site, DOE discovered 32% more waste in trenches than records indicated. DOE anticipates that work in the trenches themselves will be completed in FY 2015. Addressing the vertical pipe units (VPUs) at the site will be very complex, and potential strategies for removing contamination are currently being refined. There are 94 of these VPUs at 618-10.
- Remediation and demolition efforts are continuing at the 300 Area. A contamination hot spot was discovered underneath one of the 324 Building's hot cells; DOE is working with Washington Closure Hanford (WCH) to plan safe, effective cleanup strategies for this remediation effort. DOE anticipates that the 324 Building cleanup will take several years. Also in the 300 Area, there have been several lifts done in excess of 1,000 tons—these each took tremendous planning and work. The heavy items are now contained at ERDF.
- At the K Basin, preparations to remove sludge are ongoing. The nearly-completed K Basin Annex facility will be used to transfer the nearly 30 cubic meters of sludge at the basin to the Central Plateau. The shell of the building will be completed within the next few months, and equipment purchase and installation will occur following. DOE has high confidence that this work will be completed safely and efficiently. The actual transfer of the sludge to T-Plant will take less than one year to complete once infrastructure is in place.
- There has been a significant amount of hexavalent chromium removed from the 100-C-7 site. DOE dug out 85 feet of soil, and the agency will soon complete this effort. Restoration of the area will be targeted, and the landscape will be contoured and replanted in a very natural way.
- DOE would like to remove cesium and strontium capsules at the Waste Encapsulation and Storage Facility (WESF) to dry storage, much like a commercial nuclear facility would do.
- The TPA milestones are the cornerstone of Hanford cleanup work. DOE has completed around 1,500 of these milestones, there are currently approximately 250 milestones to go.
- DOE-RL's prime contracts all come to completion in 2018. DOE will begin procurement efforts in the coming years; the Board will learn more about DOE's acquisition strategies throughout the next few years.
- DOE currently has very strong safety records. The agency's primary goal is to keep up the strong safety culture that the agency has established.

- DOE-RL's annual budget need is approximately \$1.13 billion. The President's budget for DOE-RL in FY 2015 is approximately \$100 million less, and the site is currently operating under a continuing resolution, which will remain active until December 2014.
- Public outreach efforts are ongoing. An additional tour of the site focusing on the pre-Manhattan Era will be beginning in FY 2015. DOE-RL has heard from the community that they would like more access to the site, and the agency is working to facilitate this.
- In the coming year, DOE-RL noted that the vast majority of River Corridor work will be completed, all groundwater treatment facilities will be in place, and PFP work will enter its final stages. Following the completion of River Corridor efforts, DOE-RL will shift cleanup focus to the Central Plateau.

Doug concluded his update by thanking the HAB for their past advice and comments, and he noted that DOE-RL looks forward to working with the Board in the coming years.

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

Kevin Smith, U.S. Department of Energy—Office of River Protection (DOE-ORP) thanked the Board for their service, and he recognized that stakeholder input is especially important for Hanford, as site cleanup is highly complex and hazardous. In his agency update (provided as Attachment 2), Kevin noted the following points:

- DOE-ORP and DOE-RL are continuing to develop more efficient collaborative strategies. To facilitate this, DOE-ORP is consolidating staff into a single building. DOE-ORP is bringing in additional staff and resources to ensure that the WTP is effectively constructed and integrated with the tank farms.
- Retrieval efforts on the 16 C-Farm tanks is ongoing. Waste from 13 tanks has been retrieved; however, efforts at three tanks continue.
 - In C-105, DOE-ORP needs to develop a new system for liquefying and pumping the remaining wastes.
 - In C-111, two extended reach sluicer systems have failed. Therefore, these systems will need to be refurbished with different materials. DOE-ORP anticipates that this effort will be done this year.
 - Tank C-102 retrieval efforts should restart soon, and retrieval efforts on that tank should conclude by the end of November 2014. There are approximate 110,000 gallons remaining within the tank.
- Double-shell tank (DST) AY-102 is still seeping into its annulus at approximately the same rate as before (up to one quart per month). At the moment, there is no indication that the second shell has been breached. The State of Washington issued an administrative order requiring DOE-ORP to pump AY-102, as the tank was not in compliance with the Resource Conservation and

Recovery Act (RCRA) permit. However, DOE and Washington Department of Ecology (Ecology) have further discussed the issue, and the tank will now be pumped no later than March 2016, as heat modelling for AY-102 demonstrated that the tank's waste should be removed all at once.

- Work on the Waste Treatment and Immobilization Plant (WTP) is ongoing, and progress is being made.
 - Construction at the Low-Activity Waste Facility will likely be complete in calendar year 2017, with the check-out and operational cycle to follow.
 - The Analytical Laboratory has completed its final in-place weld repairs, and DOE-ORP is completing the initial set of analytical equipment installation efforts. Obsolescence is a persistent concern, and DOE-ORP is very carefully managing this equipment installation phase.
 - The Balance of Facilities (those facilities that support operations) are progressing. The chiller plant was constructed this year, as was the diesel generator and support equipment.
 - In August 2014, DOE-ORP authorized full-production engineering for the High-Level Waste and Pretreatment Facility. The process was rigorous and methodical. Currently, efforts are ongoing to move plans for the facility into full-construction. Limited construction on various aspects of the facility are ongoing. There are still issues to resolve, including ventilation; resolution on these issues is forthcoming.
- DOE-ORP is preparing for the next set of tank retrievals, and the agency has challenged Washington River Protection Solutions (WRPS) to both reduce the cost of retrieval and design the tank farm of the future—one that can effectively manage hazards and is able to be easily and efficiently maintained.
- The 242-A Evaporator was modified quite extensively with stimulus funding. DOE-ORP just finished a successful nuclear restart—the first that has been done at Hanford in a long time. During the first campaign, 7,500 gallons of liquid were processed, much-needed tank space was made available, and necessary troubleshooting occurred. The next campaign will likely occur in February 2015.
- The Savannah River National Lab Tank Vapor Assessment Team's (TVAT) report is currently being reviewed at the federal-level. DOE-ORP is hoping to develop technology that will allow better monitoring and measurement of tank farm vapors. An infrared detection system is one strategy that is currently being piloted. DOE-ORP and WRPS are each committed to solving the tank vapor issue.
- DOE-ORP has talked with the State of Washington and proposed a Direct Feed Low-Activity Waste (LAW) vitrification in order to begin making glass as soon as possible and to preserve the

Balance of Facilities and start up the WTP in sequence. Because of the Pretreatment Facility's ongoing technical issues, DOE currently has no way to feed the Low-Activity Waste Facility when it is ready. The Low-Activity Waste Pretreatment Facility will allow for this. DOE-ORP is working to finalize definitions for what the tank farms will need to produce, and what the WTP will process.

- The Full-Scale Vessel Testing Facility is an effort that is joint with Washington State University. The facility is on-schedule, and the testing is going very efficiently.
- Challenges in the coming years for DOE-ORP include: (1) the aging tank farm infrastructure, (2) implementing fixes for tank farm vapor issues, (3) out-year funding profiles, (4) integrating tank farms and the WTP, (5) meeting TPA/ Consent Decree (CD) milestones, (6) resolving technical issues, (7) solving remaining High Level Waste Facility (HLW) configuration issues, (8) reducing costs, (9) finding and retaining an appropriately skilled work force, and (10) ensuring quality standards and records for nuclear operations.

Kevin thanked the Board for their attention. He closed by noting that, from the perspective of DOE-ORP, the safety of workers, the community, and the environment is first and foremost in all of the agency's efforts.

Washington State Department of Ecology

Jane Hedges, Ecology, covered the following main points in her annual report presentation (provided as Attachment 3):

- Ecology worked closely with DOE-ORP to negotiate a settlement on the Tank AY-102 pump plan due to compelling evidence presented to Ecology by DOE engineers.
- Early in 2014, Ecology and the U.S. Environmental Protection Agency (EPA) issued an Agreed Order on a path forward for certain waste-handling units. DOE has been meeting all requests for information and deadlines relating to this Agreed Order.
- Also in 2014, Ecology worked to resolve comments on the draft 100-D/H Remedial investigation/feasibility study (RI/FS), provided comments on 100-N RI/FS, issued a Class II permit modification for the 242-A Evaporator, and completed a renewal of the ST4500 waste water discharge permit for Liquid Effluent Retention Facility/Effluent Treatment Facility and State Approved Land Disposal Site.
- Ecology increased its Nuclear Waste Program Compliance team from two to four individuals. EPA has assisted in training new staff and has helped with inspection commitments. Beginning in July 2015, Ecology will be able to meet all inspection commitments.
- The current Sitewide Permit is the Rev. 8c permit. Modifications and revisions are completed by quarter, as needed. Planning and forecasting dates for upcoming Rev. 8c permit modifications will be shared with HAB committees to gauge Board interest.

- In the past year, the Sitewide Permit Update, Rev. 9 has been the largest internal work item that Ecology is managing. A draft of the permit was released in 2012, and it went through an extensive public comment process. Following this effort, Ecology decided to revise the permit extensively. Ecology is close to wrapping up efforts with EPA and Ecology Headquarters relating to technical issues and decisions. There were approximately 4,000 comments received on the permit; DOE submitted many of those. Responses to public comments are developed as issues are resolved. Ecology hopes to continue working on the reissue of the Sitewide Permit in FY 2015.
- Ecology conducted over 44 presentation and outreach activities in FY 2014, reaching approximately 1,800 people. Hanford Communities has been an important partner in these efforts.
- In FY 2015, Ecology hopes to continue working with DOE to solve WTP technical issues and to continue managing tank waste effectively. Ecology will also work to continue robust education and outreach efforts.

Jane closed by recognizing that the Board has released very helpful advice throughout the past year. She noted that Ecology takes HAB recommendations very seriously and that the agency discusses the Board's suggestions in detail throughout the agency's internal work. Jane also provided Steve with a letter written by Ecology Director Maia Bellon, thanking the Board for twenty years of service.

U.S. Environmental Protection Agency

Dennis Faulk, EPA, congratulated the Board on twenty years of impactful work at the Hanford Site. Dennis noted that the Hanford cleanup efforts have changed dramatically in the past twenty years, and his project office, which was originally formed solely to manage Hanford, now has oversight over other many other sites throughout the Pacific Northwest. He recognized that the scope of the Hanford cleanup is monumental, and he noted the following major points in his report:

- The TPA agencies worked closely with the Board to conceptualize, site, and construct ERDF. The Board weighed in and recommended that the facility be expanded as waste was collected and generated.
- EPA recently issued a notice of violation and stipulated penalties regarding the removal and treatment of sludge at K Basin. DOE did dispute the rejection of the change notice, and EPA is anticipating the notice of dispute within the coming weeks. The original record of decision (ROD) required removal and treatment all in one step; EPA took this out to ensure that sludge would be removed from the River Corridor in a timely manner. While the sludge remains at K Basin, the cleanup efforts cannot fully commence in that area.
- There is still a long way to go regarding WTP construction and operation. All of the efforts around the Hanford Site will not be effective if the WTP is not able to function effectively.
- Much progress has been made regarding groundwater restoration; however, there is still much more work to do. N Area barriers are still not stocked with apatite, despite the wells being in place for over two years.

- DOE's cleanup budget for the Hanford Site is being hit harder and harder by inflation each year.
- There is a CRESA review that is ongoing throughout all DOE sites, and their report is attempting to compare risks throughout all DOE sites across the nation. EPA is curious how this report will impact future cleanup efforts and funding.

Dennis thanked Board members for their time.

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. Has there been any advanced efforts focusing on draining the DSTs? Waste that is contained within these vessels is highly concentrated—is DOE confident that this waste is able to be removed using existing technology? Are there any anticipated risks?

R. [DOE-ORP] The Direct Feed LAW facility is the most direct way to remove the most mobile of the tank wastes. DOE-ORP has looked at the risks as they stand today—the fastest way to lower existing risks to tanks, human health, and the environment is to get the WTP running as soon as possible.

Q. Who will be the new DOE-RL manager?

R. [DOE-RL] DOE-RL is on the verge of making this decision, and the Board will know soon.

Q. In June 2013, DOE-ORP released a pumping plan for Tank AY-102. This initial timetable noted that pumping would begin in January 2015. What happened to this initial schedule?

R. [DOE-ORP] The pumping plan noted that it would be based on risk; however, this was superseded by an administrative order that set the timing. AY-102 will not be ready to pump next year because of sequestration. During sequestration, procurement stopped. DOE-ORP then had to reestablish the budget. This was paralleled by DOE-ORP's discussions with Ecology regarding the risks associated with pumping AY-102 in stages.

Q. DOE-ORP noted that infrared imaging technology is being piloted at the tank farms. Is this technology looking for specific vapor compounds, or is it identifying any vapors that are chemically different from the ambient air? Is the agency continuously updating its Chemicals of Potential Concern (COPC) list? Could the Tank Waste Committee (TWC) receive a briefing on these efforts?

R. [DOE-ORP] DOE-ORP would be glad to provide a briefing to TWC, and the COPC list is continually managed. Currently, the pilot infrared system is working to spectrally analyze vapors from a distance, and, at the moment, the capabilities of the system are yet to be determined. Our goal is to be able to determine chemical composition of the vapors remotely.

Q. How does DOE-ORP plan to effectively capture acute and transitory vapors to measure composition and concentration?

R. [DOE-ORP] There are multilevel testing activities that are ongoing. If vapors are not captured on the spot, their characteristics are not being measured effectively. This is what DOE-ORP and WRPS are working to do.

Q. What tank vapors are known to be present and cause problems at the site?

R. [DOE-ORP] DOE-ORP and WRPS have been unable to identify the exact chemical or group of chemicals that have caused the most recent acute, transitory exposures. There are nine principle chemicals of concern.

Q. The recently released draft TVAT report states that there are 138 COPC at the tank farms. What is the difference between these lists? Are they the same? Could DOE-ORP's COPC list be released to the Board?

R. The COPC list is managed carefully and categorizes chemicals based on location (tanks, stacks, etc.), which tanks they are present in, and exposure severity. DOE-ORP will ensure that the Board is forwarded a copy of the COPC list.

C. Earlier this year, HAB was asked to look into emergency responses at Hanford. We observed drills and created an informational video; Benton and Franklin Counties participated in the effort. The responses to the video have been very positive. Thank you to the agency personnel who helped to make this effort so successful.

Q. Could DOE-ORP expand upon the National Lab competition referred to in the annual review?

R. [DOE-ORP] The inaugural competition was last year. The agency found that the National Labs were not up-to-date on our work, and the competition was a strategy to get them involved more fully. There are promising efforts that are coming out of this work (glass loading efficiencies, technetium capture).

Q. What progress has been made at K-East?

R. [DOE-RL] All of the buildings at K-East have been demolished, and DOE-RL is currently working with EPA to place boreholes under the reactor to check for contamination. The future focus at the Basin needs to turn to K-West and sludge removal.

C. The TPA agencies need to work together and work with the HAB regarding the cleanup budget. Many members of the public and many legislators are unaware of the extreme budget cuts at the site. Regional public budget priority meetings could help to educate the public and guide the effective use of funds.

Q. EPA recently issued new guidance relating to superfund sites and lowered the contamination criteria. The new guidance is significantly more protective for these sites. Will EPA review all of the interim RODs and revise them according to these new, more stringent guidelines?

R. [EPA] 300 Area and F Area already incorporate these new guidelines. EPA is also reviewing other waste sites; so far, only one will be impacted.

Q. The Board's mission statement notes that the Board can provide self-directed advice, as identified. How will DOE ensure that staffing is available for those Board topics that are chosen by the Board?

R. [DOE-RL] The TPA agencies will work to identify those areas where advice would be most beneficial; both DOE-RL and DOE-ORP are committed to providing senior-level staff to assist the Board. Topic selection moving forward will be a collaborative process.

Q. What percentage of the K Basin sludge is actually spent nuclear fuel?

R. [DOE-RL] None of the sludge is considered to be spent nuclear fuel. Past efforts removed small pieces of spent nuclear fuel via screening and gravitational methods. The sludge that is currently at K Basin is the remainder of these efforts.

Q. What will the HAB's role be in determining DOE-RL's new future vision?

R. [DOE-RL] It is essential that the Board weighs-in on the integrated priority list. Discussions have occurred with EPA, Ecology, and DOE Headquarters (DOE-HQ), and we will bring that integrated priorities list forward within the next few months. DOE will return to the Board to gather member perspectives on this future vision.

C. It was mentioned that the retrieval of the VPUs at 618-11 is made more difficult because of the site's proximity to the Energy Northwest generating station. One potential path forward could be to construct a portable building. This strategy has already been employed at Los Alamos and Idaho.

R. [DOE-RL] DOE-RL has looked into the potential for designing an enclosure; the agency would like to be sure that all necessary precautions are taken as work commences on VPU retrievals at the site.

Q. DOE-ORP mentioned that there is a new safety design strategy out for HLW. The document was approved on August 8, 2014. Is this available to the public?

R. [DOE-RL] Because of the ongoing CD activities, many documents are not available to the public at the moment. DOE-ORP will check on this specific document and get back to the Board.

Q. How can Direct Feed LAW activities be pursued while the CD settlement is ongoing?

R. [Ecology] Ecology has stated that it supports Direct Feed LAW; however, parts of the schedule do not meet deadlines that Ecology has set. Ecology does not see a direct conflict that would prevent DOE-ORP from moving ahead with planning and budgeting for Direct Feed LAW.

R. [DOE-ORP] There is currently a budgetary hurdle that the agency is working through, as Direct Feed LAW would be considered a new start. DOE-ORP is proceeding as aggressively as possible.

Overview: Central Plateau Cleanup Inner Area Principles

Presentation

Jim Hansen, DOE-RL, provided the Board with an introductory briefing on Central Plateau Inner Area Cleanup Principles. Jim's presentation (provided as Attachment 4) noted the following main points:

- “Cleanup Principles” are the initial conditions and approaches that will be used to guide and develop cleanup decisions in the Inner Area of the Central Plateau. These principles will guide the development of the area's RI/FSs, and they will help DOE produce RI/FS documents that meet regulator expectations. However, no formal agreements on cleanup will happen until RODs are established.
- The Inner Area is a highly complex area incorporating buildings, ponds, trenches, buried pipelines, solid waste disposal areas, and contaminated soils and groundwater. The waste sites at the Central Plateau are organized into Operable Units (OUs), and decisions will be organized by OUs as well.
- Several waste sites within the Inner Area display very similar characteristics (e.g. waste that is stored, waste that is present) but are in different OUs. Wherever technically reasonable, TPA agencies would like consistent decisions. Cleanup principles would help to facilitate this consistency, and they would work to reduce document production time and resources, document reworks, resolution of regulator comments, and decision development costs.
- Regarding the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process—the Inner Area is only just approaching the RI/FS stage (a process flow chart was provided within DOE-ORP's presentation).
- Development of the Inner Area Cleanup Principles was a joint effort between the TPA agencies, and there are no ideas embodied within the principles that are inconsistent with regulator guidance.
- The principles address five major areas: (1) land use, (2) baseline risk assessment (BRA), (3) cleanup levels, (4) point of compliance (POC), and (5) regulatory strategies. The principles, as they relate to each of these five areas are as follows:
 1. Land use for the inner area will be industrial. This principle was developed by TPA agency response and review of HAB Advice #132. The current ten square mile Inner Area footprint will not be reduced further.
 2. The BRA will use the default Ecology industrial scenario. The only institutional control is industrial land use; the BRA will not include a residential or a tribal scenario. In addition, the BRA will be done on an OU-by-OU basis.
 3. Cleanup levels will be risk-based (as opposed to dose-based, like interim River Corridor decisions). Groundwater protection modelling will be based on natural recharge, and

irrigation will not be considered. Groundwater protection preliminary remediation goals will be applied to each of five, unique geological areas of the Inner Area.

4. EPA and Ecology have stated that groundwater standards must be complied with throughout the Inner Area. DOE-RL has proposed that the entire Inner Area be the POC for groundwater protection, as opposed to single wells. DOE is also evaluating the potential for a conditional soil depth POC at the ten foot depth, as opposed to the standard of 15 feet. Unlike the River Corridor, engineered structures and mass of contamination will not be removed unless it is a risk management decision.
 5. Characterization strategies to be considered include multiple remedial technologies, risk reduction, regulatory requirements, and cost avoidance (e.g. is it more cost effective to simply remove, treat, and dispose of contamination rather than characterizing it?).
- Currently, the presented principles are being incorporated into RI/FS work plans for Inner Area OUs. Any proposed plans for cleanup will go through a public comment period, and formal agreement on the principles will occur through the RI/FS process.

Regulator Perspectives

Dennis Faulk, EPA, noted that cleanup efforts in the 200 Area will differ from past cleanup efforts on the Hanford Site, and he recognized that those differences are identified in the presented Central Plateau Cleanup Inner Area Principles. Dennis stated that the principles are a work in progress, and he recognized that there was some hesitancy on behalf of EPA to accept several of them (not going after contamination at the base of engineered structures, for example). Dennis said that, while many risk management decisions will not be made until after 2020, EPA is very interested in the preliminary thoughts and comments of the HAB, since RI/FS efforts, once completed, are very difficult to change.

Jane Hedges, Ecology, echoed EPA's statements, and she noted that the presented cleanup principles are all allowable in the current regulatory space. Ecology also expressed interest in gathering the Board's perspectives on the cleanup principles as they are developed in the coming months and years.

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. Could you expand upon the difference between a principle and a value?

R. [DOE-RL] "Principle" denotes the cleanup methods and the approaches that DOE will use. A "value" is an idea that influences how DOE approaches and manages work; however, a value does not necessarily denote the cleanup methods that will be explored for a particular operating unit (OU).

C. From the perspective of many Board members, principles and values should be aligned. Also, principles should be as unchanging as values. Neither principles nor cleanup standards should be altered

from one OU to the next. As DOE considers Central Plateau Cleanup principles, the agency should return to noted HAB values and ensure that these are aligned with one another.

R. [DOE-RL] These principles are being developed to provide a level of consistency between sites and to account for differences in geology and cleanup needs between OUs.

Q. Why is DOE not planning to study the potential risks that may present themselves in the case of institutional controls (IC) failing in the future? Both CERCLA and state law require that, if there is a reasonable likelihood that ICs will fail, these potential failings must be studied and disclosed.

R. [DOE-RL] The inner area has a lot of contamination that will be left in place; that decision was made long ago with the construction of ERDF, etc. Running scenarios for potential future residential and tribal use is very resource-intensive, and DOE believes that these resources would be better spent on direct cleanup efforts.

C. The State of Oregon has submitted written comments, and the State has strong concerns related to these principles, including the point of compliance for groundwater, the point of compliance for soil depth, and the lack of a tribal scenario. The principles presented to the Board frame the 200 Area as being cleaned to an industrial use standard, but they also functionally treat the entire 200 Area as a waste management area. This designation could result in lower cleanup standards. Many of these principles do not appear to be consistent with the HAB's previously stated values.

C. The concept of an ever-shrinking cleanup area (future designation of current cleanup areas as residential, agriculture, or industrial lands) is concerning. The City of Richland relies on the current buffer zone between residents and hazards. If the city expands into this buffer zone, the risk to citizens will increase.

Q. DOE-RL's presentation divided the cleanup area into five unique areas designated by their geologic and groundwater criteria. What data was used to define these five noted areas? Are all TPA agencies committed to this delineation?

R. [DOE-RL] As noted, the divisions are both geologic and hydrologic—the structure of the vadose zone and groundwater movement were both taken into account. This information was pulled from the Regulatory Basis and Implementation of a Graded Approach to Evaluation of Groundwater Protection (February 2012, DOE/RL-2011-50). For these parameters, DOE used existing information. As cleanup commences, we will have to continually look at the geological makeup and composition to ensure that cleanup is working with the unique geology of individual cleanup areas.

R. [EPA] The Graded Approach Document is agreed upon by all TPA agencies. We would like to ensure that we are tailoring cleanup approaches, and the TPA agencies need to begin by recognizing that the 200 Area is not geologically consistent throughout.

C. The principles as presented appear to be very assumption-rich. This is potentially problematic for their implementation; it is also problematic that DOE-RL's presentation to the Board did not fully explain what these assumptions are.

R. [DOE-RL] Keep in mind that these principles and any cleanup plans that are developed using them will need to be rigorous and satisfy regulations and regulator review. The RI/FS still needs to be completed; the risk-assessments still need to be carried out.

Q. What is the medium for the apatite barriers in the 100-N Area?

R.[Ecology] It is calcium-based material. However, the point of compliance in 100-N has already been determined under the RI/FS. Therefore, these principles would not apply there.

Q. What do the asterisks indicate in the presentation?

R. [DOE-RL] Asterisks in the Central Plateau Inner Area Cleanup Principles presentation denote new concepts.

Q. The term “point of compliance” seems to have been used in two different ways in the presentation. How can a point of compliance be an entire area as opposed to a specific point of measurement?

R. [DOE-RL] All points of compliance referenced in the presentation refer to groundwater. The standard point of compliance denotes that every well within a cleanup area must be in compliance when cleanup is completed. The conditional point of compliance referred to would measure groundwater at the borders of an area.

R. [EPA] Under DOE’s alternate proposal, the groundwater point of compliance could be calculated at the border of a waste management unit. This is true of depth as well—standard point of compliance is at 15 feet, DOE’s proposal would be at ten feet. Regulators have not agreed to this point of compliance strategy, Ecology and EPA have only agreed to allow DOE to evaluate the strategy.

Q. The presentation noted that DOE has collected data on the depth and the points of compliance. Which DOE entity conducted this data collection?

R. [DOE-RL] Local DOE offices worked with the contractor to collect this data. The data is specific to the Hanford Site, and the study has been accepted for publication in a peer-reviewed journal.

Q. Are the Central Plateau Inner Area cleanup principles finalized at the moment, or will the Board have any the opportunity to influence their development?

R. [DOE-RL] The principles are not finalized.

R. [EPA] The Board can influence the final principles. Some of the principles are more time-critical than others, however, and these will require more timely Board input. EPA will work with the River and Plateau Committee (RAP) in the coming months to identify those principles that are most in need of Board feedback. The time-critical principles are coming up within the next three to six months.

Q. Why have ICs not been addressed under these principles, and how can a draft work plan move forward using these principles if ICs are not addressed?

R. [EPA] EPA does not want DOE to consider ICs in their initial assessment. ICs are overlaid after a remedy is selected, not before.

C. As presented, these principles appear to be in a very early stage of development. As cleanup in the Central Plateau area commences, it may make sense to begin with the most straightforward OUs and then incorporate lessons-learned into subsequent work.

C. What are the realistic expectations of very long-term (hundreds to thousands of years) ICs? That aspect could be part of the dialogue to demonstrate which ICs are reasonable, and which ones are not. Since the tribal scenario will not be applied, this could be a way to take into account true cost and compare risk while proving how realistic an unrestricted use scenario would be at the fence line.

C. It may make sense to have a cleanup principle that identifies the sites that are highest risk and that may require further evaluation or enhanced cleanup standards.

C. These principles are troubling in several regards—they appear to preclude the construction of additional tank capacity, and they appear to ignore any contamination present below fifteen feet. Perhaps an additional principle could be incorporated that notes hot spot areas with high source levels of contamination will also need to be targeted by cleanup?

C. There should be a noted principle that involves the public and notes how tribal and public concerns are going to be addressed as Central Plateau Cleanup moves forward. Currently, that aspect is unaddressed. How is DOE going to remedy this moving forward with regards to Central Plateau Inner Area Cleanup principles?

R. [EPA] The principles have so far only been discussed with tribal representatives, the State of Oregon, and now the HAB. Public involvement is something that the TPA agencies will explore further in the future.

Q. Which regulatory process will DOE use to deal with groundwater cleanup? The Board heard that it would be CERCLA (especially with regards to waste that has leaked from the tanks); however, the Board has also heard that RCRA may be the framework that is used. What is the final decision?

R. The decision to use CERCLA for the groundwater units was made many years ago. We are continuing down that path. DOE did approach EPA and Ecology regarding moving the soil portion underneath the tanks to CERCLA, and there is currently no agreement regarding this transition.

C. The Confederated Tribes and Bands of the Yakama Nation is a federally recognized sovereign pursuant of the Treaty of June 9, 1855 made with the United States of America. The DOE Hanford Site was developed on land ceded by the Yakama Nation under the Treaty. The Yakama Nation retains reserved rights to this land under the Treaty and as such requests additional future government to government consultation efforts during remediation and cleanup decision-making.

C. The Yakama Nation is concerned that tribal membership is growing, and all lands used historically are needed in the future. Cleanup decisions, including the use of ICs, should be addressed with appropriate deference to Yakama Nation treaty rights. These rights should be included in the decision making process to guarantee land use for specific purposes which are considered inseparable from the Yakama way of life. Our risk scenario, shows that tribal members are at an unacceptable risk for which ICs will not provide protection without violating our treaty rights.

Q. How much of the Nuclear Waste Policy Act remains? How can there be any interim storage on the Hanford Site unless there is a permitted final storage facility?

C. It would be very difficult for the Board to weigh in on these principles by February. The Board could perhaps consider a Committee of the Whole (COTW) focusing on Central Plateau Inner Area Cleanup Principles. There is a lot of Board interest in this topic.

Q. This would be a strong opportunity for a COTW. As RAP begins this conversation in the coming weeks could EPA provide a list to the committee chair that provides some depth and clarity to regulator perspectives on the individual principles (e.g. which ones require the timeliest feedback, which ones are largely agreed upon by the regulating agencies)?

R. [EPA] The original intent was not to piecemeal this effort, but that may be how feedback works out. Two issues that are very pressing—the TPA agencies need to know if the Board fundamentally disagrees with the industrial cleanup approach or the baseline risk assessment of not running alternate scenarios. These issues are at the beginning of the process. Those two issues require the most immediate feedback.

C. How does DOE-RL recommend that the HAB and RAP proceed with discussion on these issues?

R. [EPA] If there are specific principles that do not match up with stated HAB values, that presents an opportunity for conversation.

Steve thanked Jim for his presentation and responses. The Board noted that RAP would begin discussions on the Central Plateau Inner Area Cleanup Principles at their November committee meeting. The Board also recognized the potential for a COTW following preliminary committee discussions.

Draft Advice: In-trench Macroencapsulation of Waste at ERDF

Introduction of advice

Shelley Cimon, Columbia Riverkeeper and issue manager for the draft advice, provided Board members with an introduction on In-trench Macroencapsulation of Waste at ERDF, noting that the advice was formulated by members of both RAP and the Health, Safety, and Environmental Protection Committee (HSEP). Shelley noted that the current draft advice was the third iteration of the topic; however, past versions were unable to make it out of committee. Shelley stated that both RAP and HSEP are anxious to

see this advice move forward, as in-trench macroencapsulation of large, hazardous waste at ERDF could potentially provide significant protections to Hanford Site workers.

Shelley continued by noting that the advice itself provides Board support for worker safety and the environment by recommending that certain, specific materials be treated for ERDF disposal in-trench as opposed to currently required out-of-trench treatment. As no waiver yet exists, Shelley recognized that the advice neither speaks to any specific text nor directly supports the waiver itself.

Agency Perspectives

Dennis Faulk, EPA, provided additional background on the topic, recognizing that in-trench treatment had been utilized in the past at ERDF, Trench 34, and Trench 31. However, these efforts were halted several years ago following an environmental inspection by EPA headquarters (EPA-HQ). Dennis stated that, under current superfund law, EPA-HQ has the ability to waive certain requirements if there are alternative strategies that are more protective of worker safety and the environment; in-trench treatment will accomplish both of these goals. EPA-HQ takes Board advice very seriously. This advice would help EPA-HQ understand the need for in-trench treatment at Hanford. Dennis stated that there is currently no waiver to share with the Board. The advice only comments on the process of pursuing a waiver for a very limited set of large, bulky, hazardous materials.

Dieter Bohrmann, Ecology, briefly noted that ERDF is an EPA lead project; however, this method of treatment does have the State's support.

Jeff Frey, DOE-RL, noted that workers at ERDF are very interested in implementing in-trench treatment strategies.

Board discussion

The following key points were noted during the Board discussion on the ERDF treatment advice:

- Several Board members were concerned that the text of the waiver was not available to review; however, it was generally accepted by the Board that the advice was authored in such a way that these anxieties were effectively mitigated.
- Board members noted that they were confused by the final paragraph included in the advice's background.
 - One Board member noted that the paragraph's inclusion was prompted by an understanding that controlled, indoor facilities are the safest way to treat certain wastes.
 - Several Board members were concerned that transporting large, bulky materials to a treatment facility would increase material handling and therefore risk to worker and environmental health. In addition, there was Board concern that this paragraph was framed in such a way that it constituted an additional advice bullet, as opposed to background.

- It was noted that ERDF is highly selective of the incoming wastes. One Board member recognized that waste would go to an off-site facility if it did not meet ERDF standards; therefore, it was unnecessary to include this information in the advice, as the waiver would not change ERDF's waste acceptance criteria.
- Following discussion, the Board decided to remove the final background paragraph.

After minor wording changes, the advice was approved. Many Board members expressed that they were very pleased to see this important advice move forward.

Board Leadership and National Liaison Selection

Following introductions by the nominating committee, the Board made a formal recommendation to the TPA agencies that Steve Hudson serve as Board Chair for an additional two-year term. The Board also selected Susan Leckband and Shelley Cimon for additional two-year terms as Vice Chair and National Liaison, respectively.

Board and Committee Reports

Health, Safety, and Environmental Protection Committee

Richard Bloom, Grant and Franklin Counties (Local Government), recognized that HSEP chair Rebecca Holland, Hanford Atomic Metal Trades Council, had been very busy recently with the TVAT report, and he congratulated her on her recent efforts. Richard noted that HSEP worked with RAP to bring the ERDF advice to the Board meeting; he also stated that the committee will continue to work with TWC on the topic of tank vapors. Richard hoped to conduct an optional RAD Primer session at an upcoming Board meeting that would be open to Board members interested in becoming more familiar with radiological terminology.

Public Involvement and Communications Committee

Liz Mattson, Hanford Challenge (Regional Environmental/Citizen), reminded Board members that the Public Involvement and Communications Committee (PIC) is open to all Board members. Liz noted that recent PIC meetings have worked to include more discussion on outreach materials that TPA agencies have released or plan to release. At the committee's November meeting, PIC hosted the TVAT and WRPS president Dave Olson in a joint session with RAP and TWC, and the committee received a briefing on the TVAT's draft report and a response from WRPS. Liz closed her report by requesting input from Board members on potential future committee efforts.

River and Plateau Committee

Pam Larsen, City of Richland (Local Government), recognized RAP's accomplishments in FY 2014, citing Board advice #274, #278, and #280. She also highlighted topics that the committee has been tracking, including the ERDF ROD, PFP demolition, cesium and strontium storage at WESF, long-term stewardship, the CRESP risk-assessment study, and the RCRA Class C modifications. Pam noted that RAP would continue its work on many of these issues into FY 2015. In addition, RAP would also work to discuss the next DOE-RL Vision, Building 324, K-Basin, and the F Area RI/FS response. Pam encouraged Board members to attend the upcoming November RAP meeting where the committee would begin discussing the Board's next steps relating to Central Plateau Inner Area Cleanup Principles.

Tank Waste Committee

Bob Suyama, Public-at-Large, stated that TWC was very active in FY 2014, and he acknowledged that the committee has been closely following leaking tanks, progress on emptying SSTs, DSTs conditions, WTP technical issues, tank vapor issues (joint with HSEP), and Direct Feed LAW. Bob also noted that TWC has been interested in developments resulting from the ongoing CD settlement. In the coming months, TWC will continue to analyze the tank vapor conditions, and the committee will receive a briefing on the TVAT report in November and follow up on the WRPS implementation plan in the months following.

Executive Issues Committee

Steve Hudson noted that the EIC is comprised of committee leadership. The EIC meets on a regular basis to address a range of concerns and serves as a clearinghouse for the obligations and responsibilities of the Board. The committee evaluates Board effectiveness, drafts calendars and work plans, and discusses how to involve the public in HAB meetings and events. Steve noted that the EIC will continue working to include a higher level of transparency into the committee's activities.

National Liaison

Shelley Cimon provided the Board with a three-page handout demonstrating some of the U.S. Department of Energy—Office of Environmental Management (DOE-EM) programmatic efforts in FY 2014. Shelley reported that, in March 2014, the EM SSAB Chairs successfully requested disposition maps from DOE-HQ. DOE-EM responded favorably, and a working group has been formed to create maps noting waste streams and final disposition locations across the nation. Shelley also recognized that there is the potential for nuclear wastes to be shipped from Germany to Savannah River for storage, and she recommended that the Board look into this matter more closely.

Environmental Management Site-specific Advisory Board

Steve said the SSAB is comprised of the Chairs and Vice Chairs of the seven SSAB sites in the DOE-EM complex who meet twice a year. Steve recognized that, at each EM SSAB meeting, there is a breakdown of the budget. Steve returned to the HAB with a disposition handout that was brought forward by the Idaho National Laboratory. He encouraged Board members to look at the handout, as it was very well done. Steve noted that a major topic of conversation at the last EM SSAB meeting involved budget issues, and he has been tasked with correlating all of the budget information presented to the EM SSAB. Susan

recognized that there was widespread frustration that budget priorities are not shared with SSABs earlier in the process.

Budgets and Contracts Committee

Jerry Peltier, City of West Richland (Local Government), said that the Budgets and Contract Committee (BCC) will likely begin meeting again in early 2015 as DOE begins releasing budget information. In FY 2014, BCC worked to release advice on the Lifecycle, Scope, Cost, and Schedule Report as well as the FY 2015 Presidential Budget and the FY 2016 Budget. Looking toward future committee discussions, Jerry recognized that it would be helpful for DOE to note what impacts falling appropriations will have on ongoing and future cleanup work. Jerry was hopeful that this could be incorporated into future BCC committee meetings.

Board discussion

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

The following key points were noted during the Board discussion following committee reports:

- The Board was curious about the budget appropriations of other EM sites. Steve recognized that the trends seen at Hanford (e.g. receiving less than appropriated) were also seen at these other locations. He stated that Hanford might, on average, fare better than other sites, many of which are transitioning into long-term stewardship.
- Pam Larsen, City of Richland, provided a brief synthesis of an Energy Community Alliance call that she participated in regarding cleanup at New Mexico's Waste Isolation Pilot Plant (WIPP). The event that occurred earlier this year was initially caused by an improperly maintained vehicle that caught fire. The fire caused smoke, which travelled throughout the underground facility. A barrel in panel 7, room 7, popped open. The state of New Mexico has requested that this barrel be retrieved; however, the magnesium oxide that was placed on top of the barrel is now coating everything. WIPP is currently looking to image the popped barrel with a camera on a boom. There are daily entries into the underground that are occurring, and 70% of the contamination in the underground facility has been mapped. WIPP is hoping to emplace waste again by early 2016, and they plan on beginning with 20-25 shipments per week. WIPP received a special anomaly in the continuing resolution to fund this cleanup effort.
- Gary Garnant, Grant & Franklin Counties, noted that he had the opportunity to tour the waste control site in Texas. Gary stated that it is a private, and therefore more costly, storage site. Materials at the facility are stored 1,200 feet underground in geologically stable red-clay. He noted that his visit was insightful and that he would place materials from the tour on the HAB's SharePoint site.

Public Comment

No public comments were provided.

Board Business

Letter on Methodology Used for the Hanford Site-wide Risk Review Project by CRES P

Barb Harper, Confederated Tribes of the Umatilla Indian Reservation, provided the Board with an introduction to the letter commenting on CRES P's draft methodology. Barb reminded those present that the document was a letter, not advice, and she noted that it works to capture concerns expressed by RAP committee membership following CRES P's presentation at the September HAB meeting. Barb noted the following overarching concerns reflected in the letter:

- CRES P did not define "risk" in a way that is consistent with CERCLA/RCRA. CRES P also confuses "risk assessment" with "risk management."
- The study only looks at the risks that remediation strategies present to cultural resources at the Hanford Site; it does not recognize risks associated with contamination.
- While the review appears to be systematic on the surface, it is qualitative in nature and based solely on the understanding of CRES P researchers. Many of the underlying conceptual assumptions are illogical or controversial.
- The study did not recognize treaty rights.

Board Discussion

The following key points were noted during Board discussion on the Methodology used for the Hanford Site-wide Risk Review Project by CRES P letter:

- Board members agreed that the letter accurately captured the major issues with the draft CRES P methodology.
- One Board member expressed frustration that a substantial amount of money was invested in the effort. Another Board member noted that no additional Hanford Site cleanup funds should be devoted to CRES P studies in the future.

The Board agreed that the letter should be sent to Mark Whitney, DOE-EM Acting Assistant Secretary.

EM SSAB Recommendation

Steve introduced the EM SSAB Chairs' Recommendation to Initiate the Process of Permit Modification for Additional Surface Storage at WIPP. He stated that the EM SSAB advice was originally prepared by the Idaho Chair in response to WIPP's inability to accept waste shipments. Because of this, several individual sites are storing waste individually as they await WIPPs reopening. These sites are quickly running out of space, and the Chairs' recommendation encourages that WIPP explore permit

modifications to construct additional above-ground interim storage space to allow waste shipments to continue until the underground disposal site is approved for reopening.

Ken noted that this new storage strategy would need to be approved by the State of New Mexico, and he acknowledged that there is currently no permit for the state to consider.

Board Discussion

The following key points were noted during Board discussion on the EM SSAB Charis' recommendation:

- One Board member noted that a robust backlog at WIPP could be problematic for the site, as above-ground storage was never the site's intended use. She thought that this above-ground storage could be difficult for WIPP to accommodate, even if the January 2016 reopening of the facility is observed.
- Board members noted that it would have been beneficial if the EM SSAB had circulated the recommendation in advance of the Board meeting. One member recognized that it would have been helpful to contact local stakeholders in New Mexico to assess their feelings on the matter. He also recognized that DOE is required by court order to stabilize or treat any waste that was expected to remain above-ground for an extended period of time. This Board member recommended that the Board not approve the EM SSAB recommendation.
- One Board member advocated for the recommendation by stating that the text did not endorse above-ground storage. Rather, it requested that a process begin. She recognized that the process for approval would be long, and requesting that it commence soon may be beneficial in the long-term. Another Board member echoed this belief, recognizing that backup strategies for effectively storing our nation's hazardous nuclear wastes are needed.
- One Board member expressed concern that the permitting process for above-ground storage would take much longer than one year. She noted that the recommendation advocates a "quick-fix" for a very complex problem.
- One Board member expressed concern with the cost of the permitting process that the recommendation advocated.
- Several Board members expressed concern that the root of the current problem at WIPP is that there are unanticipated materials packed inside of the barrels being shipped to the site. These members recognized that it is vital for WIPP to understand the composition of incoming waste; if another incident were to happen above-ground, it would be very difficult for the site to manage.

The Board was unable to reach consensus on the EM SSAB advice. Steve noted that, while a majority of the Board did approve the EM SSAB Chairs' recommendation, he was not comfortable signing the advice without HAB consensus. Therefore, the recommendation would not move forward with HAB approval.

Updated HAB FY 2015 Work Plan

Steve provide an update on the FY 2015 Work Plan to the Board. He noted that the document is robust and flexible. He stated that the TPA agencies have committed senior-level staff to consistently support many of the topics, and he assured the Board that emerging issues could be incorporated into the work plan via quarterly updates. Steve encouraged Board members to think of the work plan as a work in progress, and he noted that a variety of HAB deliverables were requested by the TPA agencies on the noted topics (e.g. advice, support documents, engagement plans).

Cathy recognized that this latest iteration of the work plan incorporated feedback from both RAP and TWC. She reiterated that the document is flexible, and that it was created through the collaborative efforts of Board and TPA agency leadership.

Update on Board Procedural and Operational Issues

Steve stated that Bob had recently completed a re-write of HAB sounding board protocols. He also recognized that the EIC had recently discussed meeting protocols, as well. The Board and the EIC will continue to look into strategies for tracking agency requested information more effectively; this will likely involve enhanced use of the HAB's SharePoint website. Steve noted that Board members should expect emails highlighting this information in the coming months.

Susan noted that she was working with several education entities to explore the possibility of adding a student member to the Board. She noted that she would try to bring a proposal to the Board soon highlighting this potential addition.

Cathy reminded Board members to submit their travel requests to DOE as soon as possible.

Preliminary November Board meeting topics

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

- Agency reports
- Committee reports
- An update on tank vapors and the WRPS implementation plan
- Discussion of ERDF proposed plan (tentative; plan scheduled for release in January 2015)
- Placeholder for draft advice (tentative)
- Central Plateau Sounding Board/Tutorial
- Treaty of 1855 - 101 presentation and RAD Primer (potential evening presentations)

Closing Remarks

Steve thanked Board members for their attendance, thoughts, and decisions. The meeting was adjourned.

Attachments

Attachment 1: DOR-RL agency Annual Report (presentation)

Attachment 2: DOR-ORP agency Annual Report (presentation)

Attachment 3: Washington Department of Ecology agency Annual Report (presentation)

Attachment 4: Central Plateau Inner Area Cleanup Principles (DOE-ORP presentation)

Attachment 5: Hanford Advisory Board Draft Advice on In-Trench Macroencapsulation of Waste at the Environmental Restoration Disposal Facility (Version 1 and Version 2)

Attachment 6: Hanford Advisory Board Draft Letter on CRESM Methodology for the Hanford Site-wide Risk Review Project

Attachment 7: EM SSAB Draft Chairs' Recommendation to Initiate Process of Permit Modification for Additional Surface Storage

Attendees

HAB MEMBERS AND ALTERNATES

Gabe Bohnee, Member	Ken Niles, Member	Larry Lockrem, Alternate
Janice Catrell, Member	Jerry Peltier, Member	Jonathan Matthews, Alternate
Shelley Cimon, Member	Maynard Plahuta, Member	Liz Mattson, Alternate
Sam Dechter, Member	Gerry Pollet, Member	John Martell, Alternate
Robert Davis, Member	Mecal Seppalainen, Member (phone)	Edward Mausolf, Alternate
Earl Fordham, Member	Bob Suyama, Member	Peggy Maze Johnson, Alternate
Gary Garnant, Member	Art Tackett, Member	Kristen McNall, Alternate
Harold Heacock, Member	Gene Van Liew, Member	Rudy Mendoza, Alternate
Floyd Hodges, Member	Richard Bloom, Alternate	Emmett Moore, Alternate
John Howieson, Member	Eric Clements, Alternate	Edward Pacheco, Alternate
Steve Hudson, Member	Shannon Cram, Alternate (phone)	Ed Revell, Alternate
Russell Jim, Member	Barbara Harper, Alternate	Margery Swint, Alternate
Pam Larsen, Member	Jeff Hunter, Alternate	Jean Vanni, Alternate
Susan Leckband, Member	Paige Knight, Alternate	Steve White, Alternate
Melanie Myers-Magnuson, Member	Mike Korenko, Alternate	

AGENCY, CONTRACTOR, AND SUPPORT STAFF

Jeff Frey, DOE-RL	Dennis Faulk, EPA	Todd Nelson, BNT
Jim Hansen, DOE-RL	Emy Laija, EPA	Sonya Johnson, CHPRC
Karen Lutz, DOE-RL	Dieter Bohrman, Ecology	Dale McKenney, CHPRC
Doug Shoop, DOE-RL	Madeleine Brown, Ecology	Laura Bliss, CRESP
Kristen Skopeck, DOE-RL	Jane Hedges, Ecology	Tammie Gilley, EnviroIssues
Alex Teimouri, DOE-RL	Heather John, Ecology	Cathy McCague, EnviroIssues
Geoff Tyree, DOE-RL	Ron Skinnarland, Ecology (phone)	Ryan Orth, EnviroIssues
Lori Ganache, DOE-ORP	Tom Rogers, WDOH	Brett Watson, EnviroIssues
Steve Pfaff, DOE-ORP		Dan Butler, MSA
Kevin Smith, DOE-ORP		Sharon Braswell, Northwind/DOE-ORP
		Michelle Searls, Northwind/DOE-ORP
		Peter Bengtson, WCH

MEMBERS OF THE PUBLIC

Emily Bays, Hanford Challenge	Bruce Ford	Chrissy Swartz, Heart of America Northwest
Annette Cary, Tri-City Herald	Jane Stewart (phone)	Steve Weil