

FINAL MEETING SUMMARY

HANFORD ADVISORY BOARD

November 5-6, 2009

Richland, WA

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This is only a summary of issues and actions in this meeting. It may not fully represent the ideas discussed or opinions given. Examination of this document cannot equal or replace attendance and public participation.

Executive Summary

Board action

The Board adopted three pieces of advice concerning 1) Lifecycle cost and schedule report 2) proposed consent decree and Tri-Party Agreement modifications, and 3) the Tri-Party Agreement Community Relations Plan.

Board business

The Board will have committee calls and meetings in November. The Board discussed:

- Committee of the Whole meeting schedule; the Board did not set a date for a meeting to discuss the Tank Closure and Waste Management Environmental Impact Statement
- Process for developing advice from a COTW meeting
- February Board meeting topics
- Board self-evaluation: online evaluation tool will be sent out in December
- Annual report is being developed; Board members should send photos to EnviroIssues

Presentations and updates

The Board received 1) updates from the Department of Energy, the Washington State Department of Ecology, and the U.S. Environmental Protection Agency about proposed consent decree and amendments to the Tri-Party Agreement, 2) a tutorial on the National Environmental Protection Act, the Comprehensive Environmental Response, Compensation and Liability Act, and the Resource Conservation and Recovery Act, and 3) an overview of the Tank Closure and Waste Management Environmental Impact Statement.

Central Plateau Cleanup Completion Strategy and Sounding Board

The Board heard a presentation on the Central Plateau Cleanup Completion Strategy and conducted a Sounding Board to provide comments to the TPA agencies.

Public comment

No public comment was provided.

HANFORD ADVISORY BOARD
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Susan Leckband, Non-Union, Non-Management Employees (Hanford Work Force) 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 ongoing opportunities for public comment.

Board members in attendance are listed at the end of this summary, as are members of the public.

Four seats were not represented: Franklin and Grant Counties (Local Government), Washington League of Women Voters (Regional Environmental/Citizen), Physicians for Social Responsibility (Regional Environmental/Citizen), and the Confederated Tribes of the Umatilla Indian Reservation (Ex-Officio).

Welcome, introductions and announcements

Susan Leckband announced that Ralph Patt, a former Board member, recently passed away. She said he was a marvelous supporter of the Board.

On Friday during the lunch hour, the Department of Energy (DOE) hosted an Adobe Flash demonstration of the Central Plateau cleanup completion strategy. This presentation was previously shown at the Committee of the Whole (COTW) meeting on October 29.

Susan noted that the senior DOE managers were not at the Board meeting because they are at a leadership session in Washington DC. Dennis Faulk, Environmental Protection Agency (EPA), introduced new staff members Robin Paul, Chris Guzzetti and Wendy Watson (attorney).

Susan Hayman, EnviroIssues, reviewed the ground rules and the one question/one follow-up structure.

Board meeting goals included:

- Receiving updates from the Tri-Party Agreement (TPA) agencies
- Receiving a tutorial on the National Environmental Protection Act (NEPA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and the Resource Conservation and Recovery Act (RCRA)
- Receive an overview of the Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS)
- Provide feedback on the Central Plateau cleanup completion strategy
- Discuss draft advice for:
 - Lifecycle cost and schedule report
 - Proposed consent decree and TPA modifications
 - TPA Community Relations Plan (CRP)
- Conduct routine Board business, including committee reports and national liaison

The Board meeting was audio-recorded.

Confirm September meeting summary adoption

Board members did not submit any major changes to the September meeting summary. The September meeting summary was finalized and adopted over email within the operating ground rules requirement of 45-days after the meeting.

The adopted September summary was confirmed. It is available on the HAB website.

Committee reports

Tank Waste Committee (TWC)

Larry Lockrem, Non-Union, Non-Management Employees (Hanford Work Force), said TWC's October meeting was productive, and the committee discussed and heard updates on the 242-A evaporator, long-term needs in the tank farms, and waste areas performance. For November, the committee will review the draft DOE-Office of River Protection (DOE-ORP) baseline report and a summary of system plan revision 4. Larry said they will start reviewing the TC&WM EIS. The committee is also working with DOE-ORP to develop a statement of work to hire a technical expert to help the Board review the TC&WM EIS.

River and Plateau Committee (RAP)

Pam Larsen, City of Richland (Local Government), said the committee discussed the Central Plateau strategy in October and sponsored a COTW meeting on October 29. She said it will be good for the whole Board to learn more about the strategy today. In November, the committee will focus on:

- Central Plateau cleanup completion strategy
- Pre-1970s transuranic waste (TRU), including liquid TRU: Planning for this waste, risk factors for leaving it in place, remedies, characterization
- Baseline assumptions workshop: RAP is working with DOE to select an appropriate timeframe
- Roadmap
- RCRA site-wide permit
- Long-term stewardship

In January, RAP will review the M-15 and M-91 change packages and the groundwater alternatives workshop. Pam said the committee is busy and has a list of issues in the "holding bin."

National liaison

Susan Leckband updated the Board on behalf of Shelley Cimon, Public-at-Large. Shelley recently attended the third annual Radiological Waste Summit, the Intergovernmental Meeting, and the Environmental Management – Site Specific Advisory Board (EM-SSAB) meeting. Susan reviewed some of the national issues:

- Yucca Mountain: A Blue Ribbon panel will be commissioned to review Yucca Mountain as a waste repository. Susan said Max Power has been recommended for the panel. She did not know who else has been recommended or who is picking the participants.
- Inter-site dependence for low-level waste and mixed low-level waste: DOE anticipates generating 2.2 million cubic meters of low-level waste and mixed low-level waste between 2009 and 2015. Susan said this does not include waste generated by American Recovery and Reinvestment Act (ARRA) projects.
- Nuclear Regulatory Commission (NRC): Susan said there is a major initiative to open Part 61 waste classification requirements, which will have a direct impact on DOE sites around the nation. Susan said NRC has historically not been very transparent, but they will be encouraged to hold a meeting in the Tri-Cities. Susan said part of the concern is the change would reclassify A, B and C low-level waste which states have previously banned. She noted that DOE-Headquarters (DOE-HQ) is considering if the Board can ask NRC for a workshop at Hanford so they can better understand potential implications at Hanford.

Emmett Moore, Washington State University (University), asked if the proposed changes are available on the federal register for public viewing. Susan said she will check and let Emmett know.

Dirk Dunning, Oregon Department of Energy (State of Oregon), said NRC is looking at standards in Europe under the International Atomic Energy Agency (IAEA). He said, for example, depleted uranium does not fit into the system well, but is currently classified as Class A. Dirk said the only part open for public comment right now is depleted uranium.

Pam said she attended the Intergovernmental Meeting. She said DOE-HQ recognizes the need to support its field offices. DOE-HQ wants to provide more authority to field managers so they can make decisions locally, which is something the Board has supported over the years. Pam added that there is an emphasis on seeing if melters can be more efficiently designed. She noted this is not to defer Waste Treatment and

Immobilization Plant (WTP) startup, but to look at melters that will be installed after the original ones have completed their lifespan. Pam added there is recognition that the secondary waste stream needs to be dealt with; it is an EM-1 priority and something the Board has been concerned about for a long time.

Bob Suyama, Public-at-Large, new HAB vice-chair, attended the EM-SSAB meeting in Idaho Falls. He said the HAB is a leader in the EM-SSAB because it has operated for so long and has experienced members. Susan Leckband said she will send a link to EM-SSAB presentations to the Board. The next EM-SSAB meeting is in the spring.

Susan said the EM-SSAB produced a piece of advice about the inclusion of option periods in DOE requests for proposal (handed out to the Board). [Facilitator note: The Board subsequently approved this via email following the meeting, as seeking approval during the meeting was inadvertently overlooked on Friday.]

Health, Safety and Environmental Protection Committee (HSEP)

Keith Smith, Public-at-Large, said HSEP met on October 8 to discuss uniform training. Keith said uniform training becomes an issue when multiple contractors are working on the site. Washington Closure Hanford (WCH) gave a presentation and said they are moving a significant amount of their training over to HAMMER, which was encouraging to hear.

Keith said the committee will focus on tank vapors, a topic that is both a committee and DOE priority. DOE and the tank farms contractor are strengthening their tank vapor program significantly, expanding the zone where respirators are required and expanding the industrial hygiene program.

Tom Carpenter, Hanford Challenge (Hanford Work Force), added that there has been a lot of progress this year with tank vapors. The Independent Concerns Council and Hanford Concerns Council are also working on the issue. The focus is on a broader range of sampling and monitoring, and getting real-time monitoring. Tom said they are also focusing on ensuring that workers receive an appropriate response when they report for medical evaluation. They are also working on creating a lifetime documentation system of what chemicals workers have been exposed to throughout their career.

Keith said the committee will have a joint meeting with TWC about WTP and preventing chemical exposures.

Public Involvement and Communications Committee (PIC)

Steve Hudson, Hanford Watch of Oregon (Regional Environmental/Citizen), said PIC needs more membership. It is becoming very proactive and has many issues that need issue managers. It is also producing more advice. PIC is working on:

- Becoming more involved in other committee meetings to identify cross-over issues
- Recommending additional types of tools for public involvement
- Increasing committee membership
- Building an educational base and pursuing evening seminars
- Identifying future audiences and getting them involved now in Hanford cleanup
- Identifying technical committee members to serve as liaisons to PIC
- Collecting public meeting “dos and don’ts” from Board members who attend public meetings
- Working with the TPA agencies to update and revise the CRP
- Working with the TPA agencies to develop a strategic plan for public involvement at Hanford
- Identifying issue managers for State of the Site workshops, RCRA site-wide permit and TC&WM EIS rollout, PW 1, 3 and 6, and a public involvement toolbox

Mike Korenko, Public-at-Large, said he will work with Steve to identify how best to reach his constituents. Larry said he felt the Hanford workforce is well-informed but does not really understand how the Board supports and represents the community. He is working with Susan Leckband to educate the workforce about the Board’s work.

Budgets and Contracts Committee (BCC)

Gerry Pollet, Heart of America NW (Regional Environmental/Citizen), said BCC has been busy developing advice for the proposed consent decree and TPA modifications, and the lifecycle cost and schedule report.

The committee is also looking at the pension and benefits program and how workers have been affected by the enterprise company failure. Keith, one of the issue managers, said they have not received a lot of information yet because DOE will respond to the employees first. Paula Call, DOE-Richland Operations Office (DOE-RL), said there was a Notice 351.1 regarding reorganization contracts in the Federal Register. She said there was a big public response and a summary of comments is available online. DOE is letting the notice expire because there is no action. Keith said DOE will learn more after they respond to the employees. Gerry added that the committee is seeing if there are any costs savings by using a single benefits plan on site instead of multiple plans.

Gerry said the committee will review agency responses to budget advice to ensure they are robust and appropriate. The committee is also hearing a draft tank farm baseline presentation with TWC in November. In December and January, BCC will look at the three site-wide contracts and their fiscal and accountability provisions, the ARRA work plan, Fiscal Year (FY) 2011 budget request and FY 2012 planning.

Executive Issue Committee (EIC)

Susan Leckband said EIC is meeting the evening before every Board meeting and has regular conference calls. She said this year is extraordinarily busy for the Board. EIC is working on:

- Scope of work for the technical review of the TC&WM EIS
- Board processes and agency responses to advice
- Process for developing advice from a COTW
- Spring leadership retreat: Tentatively scheduled for April 28-29 in Boardman, Idaho.

In September, the Board agreed to move November committee week, so committees will meet the week of November 16. The Board meeting calendar is available online at www.hanford.gov.

Susan charged all Board members to become more involved at the committee level. The Board is very busy and needs all members to participate.

Advice on the TPA Community Relations Plan

Steve Hudson introduced the draft advice on updating and editing the CRP. He said PIC began looking at the CRP in September 2008 and asked the agencies to update it. The current version was adopted in 2002. Steve said the document itself is good and provides high-level information.

The draft advice focuses on updating the CRP in three areas: Content, structure and technical/mechanical aspects. Steve said one example is organizing the flow of the plan – it should start with high-level information and then go into detail, so people get the general point of the plan even if they do not read the whole thing.

Steve noted that the PIC will have an opportunity to review the draft CRP and provide additional input before it goes out for public comment and is finalized.

Agency perspective

Emy Laija, EPA, said EPA feels the CRP is important and useful and should be kept up to date. She said they always want to make it better, and there is always room for improvement. She looked forward to receiving the advice. Emy noted that the agencies are spending a couple days in December working on a revision. The draft revised CRP will be ready in January.

John Price, Ecology, appreciated the opportunity to improve the CRP. He asked for clarification on the Board's intent behind asking for agency response to comments two weeks prior to any formal action by the agency. Is the intent to have some dialogue during that period or is to ensure the response summary is actually received two weeks prior to formal action? He also asked for clarity on "formal action" – does that mean when the actual activity takes place or when a decision is signed?

Matt McCormick, DOE-RL, agreed that DOE would also like clarity on the advice point about receiving agency responses to public comments two weeks prior to formal action.

Discussion

Nancy Murray, Public-at-Large, requested that the Board and agencies refrain from using acronyms.

Gerry commented that community “relations” sounds too much like public relations. He thought a more appropriate title would be something like “community involvement plan.” Dirk suggested referring to the document as the Community Involvement Plan in the advice. Emy said while the agencies are already considering changing the name of the CRP, the Board should continue to refer to it by its current name to eliminate confusion.

Gerry said the advice point about receiving agency responses to public comment two weeks before a decision is made was developed because in September, the public received a response to public comments on the TPA change package. The agencies had already signed the TPA change package before commenters saw the agencies’ responses to their comments. Gerry said a number of people thought the agencies misunderstood their comment, but the change package was already signed, so they never had the opportunity to clarify their comment to receive an appropriate response. Gerry said another problem was the agencies responded to some comments by saying they were “out of scope.” He thought the process would be more iterative if the public were able to see responses to their comments before decisions are made.

Gerry added that the advice calls for the CRP to describe a public involvement strategic plan, which would be included as an attachment to the CRP.

Bob Suyama suggested adding another bullet to encourage the agencies in the CRP to adopt and use new and evolving electronic communication technologies as they come into general use by the public. He said the Adobe Flash Central Plateau cleanup completion tool was very interesting. The Board agreed to add the concept to the advice.

Rob Davis, City of Pasco (Local Government), said the advice should more clearly distinguish between the public involvement strategic plan and the CRP. The Board agreed and revised the advice to make it clearer.

Doug Mercer, University of Washington (University), commented that it is important to know how to measure the success of public involvement, and understand how different agency and public perspectives of success can differ. He thought the agencies should think about how they measure meaningful interaction with the public. Matt commented that one measure is, does the strategy provide early and often involvement opportunities? Dennis added that EPA’s number one goal for public involvement is to reach sustainable decisions that are supported by the public. He said Hanford has a robust and sophisticated public involvement process, and the challenge lies in keeping people engaged and interested over many years of cleanup.

Doug added that the agencies and the Board should think about the barriers to reinventing the CRP and outreach – is it budget, legal constraints, lack of coordination, etc? Susan Hayman noted that PIC is planning a strategic public involvement discussion and she encouraged Doug to bring that point to this discussion.

Requesting a public meeting

Emmett thought the bullet specifically saying that the agencies should provide an opportunity to hold public meetings during comment periods when ten or more people request a meeting was too specific and could end up being mischievous; he thought it could result in ten people anywhere requesting and getting a meeting when one is unnecessary. Emmett suggested saying instead that the agencies will provide a mechanism for people to request a public meeting during public comment periods.

Gerry commented that general statements like that have failed and said Spokane is an example where people have requested public meetings and DOE has not held them. He said it is state law to hold a public meeting if ten people request it. Emmett asked for the name of the regulation for reference. Steve Hudson said it was MTCA 173-340-600, section 5. Steve said it states that during any comment period announced

by notice, if ten or more people request a meeting of the subject of notice, the agencies will hold a meeting for the purpose of receiving comment. Emmett confirmed he would not oppose the existing language.

Dirk asked PIC to have a discussion about shortening and sharpening up presentations at public meetings so the public has more time for comment.

Harold Heacock, TRIDEC (Local Business), thought the advice diverged from being policy-level when it makes statements like the CRP should “accurately use standard American English.” He did not think the Board should issue advice with that kind of detail. Susan Leckband noted that the agencies asked for more detail in this advice than the Board usually provides. She also noted that substantive changes like that should be brought up on Thursday as Board process dictates. Harold said he would not oppose the advice as it is.

Keith thought it was good for the Board to offer potential solutions when it is critical about a document or process in a piece of advice.

Nancy suggested rearranging some of the advice bullets, but did not pursue doing so because it was Friday and final language was needed. Gerry added that if Board members have changes or edits, they should provide them to the authors on Thursday so there is time to incorporate changes.

Rob asked what agency implements the “Environmental Justice Program;” Emy said this reference is to the EPA program.

Steve Hudson clarified that when the advice references a public involvement strategic plan, it should be clear that the strategic plan does not yet exist.

The advice was adopted.

Advice on the lifecycle cost and schedule report

Gerry introduced the draft advice on the lifecycle cost and schedule report. He said DOE agreed to create the report. The advice about the proposed consent decree and TPA modifications includes some background and advice points about the report, but the committee thought the report merited its own advice because it is important and they wanted it easily accessible.

Gerry said the Board has issued advice already on a lifecycle cost and schedule report, but the committee did not think the settlement agreement reflected that advice. The draft advice calls for DOE to provide adequate information for the public and regulators to review long-term costs, schedule and assumptions for projects at Hanford; provide information to determine if schedules and milestones could be accelerated; allow for public review of whether TPA milestones delays could be avoided or reduced if budgets were not constrained; and provide public review of whether assumptions in DOE’s baselines reflect public values for accomplishing cleanup.

Agency perspective

Steve Pfaff thought the advice was clear. Matt thought the Board could suggest specific changes to the proposed TPA modifications that reference the lifecycle report. He said that would help DOE finalize the milestone language. Gerry said that would be difficult to do, but they would discuss it in committee.

John thought the bullet about having the information to determine if schedules and milestones could be increased is what Ecology wanted when it requested the report. John said the advice will also be considered as a public comment during the public comment period on the TPA change package.

Dennis thought the advice was timely, as the agencies are starting to define the content and purpose of the report. He thought DOE was amenable to making it useful for everyone to use. Dennis said some of the information in the background section sounded like advice and should be moved into the advice section.

Discussion

Ken Gasper, Benton County (Local Government), commented that the lifecycle report will be an important tool for the Board to use as a basis for evaluation and crafting advice in the future.

Paige Knight, Hanford Watch of Oregon (Regional Environmental/Citizen), asked if the advice will have any impact or connection to the TPA change package. Gerry said the change package is currently out for public comment and the advice is relevant. Susan Leckband noted that the agencies have already agreed to create the lifecycle report regardless of the advice. She also noted that in the past, the Board has advised that milestones not change until the report is complete.

Paige asked if the advice will cause a delay in reaching an agreement on the TPA modifications. The Board clarified in the advice that DOE should provide enough information to help the public assess whether proposed delays to TPA milestones could be avoided or reduced if budgets were not constrained or if work were re-prioritized.

Dirk thought it would be very difficult to provide substantial detail for out-year projects because they are not well defined. He thought a reasonable guess at the schedule and cost is doable, but he doubted the Board would see quality cost estimates for projects that are five years out or more.

Rob thought there should be provisions for updating the report on a regular basis because of changing budgets. Steve Pfaff said the proposed changes already include a required annual update of the lifecycle report. The Board decided to also include it as an advice bullet.

Jane Hedges, Ecology, commented that references to the lifecycle report are in the TPA, not the consent decree. The Board changed the wording to refer to the “settlement package with the consent decree and TPA change package.”

Tying budgets to milestones

Rob said budgets should be tied to milestones, and the agencies should know what milestones will be accomplished with a specific budget request. Paige said she would like to know the pros and cons of tying budgets to milestones.

Dennis said practically, it would be difficult to do. Expenses such as maintenance and infrastructure are not tied to milestones, but do require funding. Rob understood, but thought they could build more credibility with Congress and the public if Hanford can show that 50% or 60% of funding goes to actually meeting milestones. He said billions of dollars are spent at Hanford – how much goes to completing milestones? Matt added that not all cleanup is driven by milestones. For example, implementing groundwater pump and treat systems are not tied to a particular milestone.

Steve Pfaff said he liked the idea of knowing how much money goes to completing a milestone, but much funding essential to cleanup goes to programs that are critical to *supporting* cleanup, such as health and safety programs.

Keith added that when this has been tried in the past, costs such as vehicle maintenance were folded into project costs, which resulted in poor equipment service because management did not understand or make it a priority. He said the Board should be careful about what to include as specific advice points.

Doug supported the concept, but asked if the Board should pursue this in committee and develop a separate piece of advice. Rob agreed, but thought Hanford should be confident to ask for more money if it is tied to real work; that confidence is a tool to get funding.

The Board decided to add an advice bullet stating when possible, DOE should connect project specific costs, schedules and assumptions to milestones or other regulatory requirements.

The advice was adopted. It will also be submitted as a formal public comment on the proposed consent decree and TPA modifications. The State of Oregon abstained from the advice as formal public comment because they have a separate settlement agreement with DOE.

Advice on the proposed consent decree and TPA modifications

Gerry introduced the draft advice on the proposed consent decree and TPA modifications. The Board had a COTW meeting on October 6 and agreed on the principles. Jeff Luke, Non-Union, Non-Management Employees (Hanford Work Force), and a co-author of the draft advice, reviewed the entire proposed consent decree and TPA modifications. Gerry explained that the advice is long because it is intended to help educate people so they can better understand the proposal and provide informed comments. He said not many people will read the entire change package. He noted that the advice is almost entirely composed of past advice points about what negotiations should include and accomplish. The only new bullet points are about the public comment process. Gerry also said the background section helps explain advice points.

Gerry reviewed all of the advice bullets, which included among other things, statements of the Board's support for the use of a consent decree as a necessary tool to ensure adequate funding and progress; to increase the rate of tank retrieval; and to remove, treat and dispose of waste instead of capping at all times possible.

Agency perspective

Steve Pfaff appreciated the Board's effort to use the advice as an educational tool, so many of his comments relate to accomplishing that goal. He said in general, the Board should consider shortening the advice. Steve noted his questions about the advice and parts that could be clarified:

- The background includes statements that the Board should clarify or capture in the advice section, such as does the Board want the agencies to stop negotiating until a lifecycle report is complete?
- Steve said he was interested in the "means by which" tanks could be emptied faster.
- Wiped film evaporator – Steve said the advice point about committing to new milestones based on using a wiped film evaporator is somewhat at odds with DOE's goals for the evaporator. DOE will use the wiped film evaporator as a mobile unit to address single point failure if the existing large scale 242-A evaporator fails. Second, the wiped film evaporator will assist the retrieval mission by increasing tank side evaporator availability to make the process more efficient. Third, the wiped film would support an optimized approach to WTP secondary waste streams. Steve said he was not saying using a wiped film evaporator would not free up double-shell tank space, but there are many factors to consider. Using it will provide more reliability in the cleanup mission.
- Bulk vitrification (bulk vit) – Steve said he questioned how much more proven other technology options are over bulk vit. DOE has tested bulk vit extensively, and even though Jim Rispoli's commissioned report in 2008 stated that building a second low-activity waste (LAW) facility is the first choice, it did not indicate that DOE should not use bulk vit at all. Steve said he did not want to throw out bulk vit as an option at this point.
- Steve thought it would be useful to know why the Board thinks importing offsite waste would severely impact Hanford when Hanford currently has large amounts of waste.

John said the advice is consistent with what Ecology has heard at the three public meetings the TPA agencies have held so far about the proposed consent decree and TPA modifications. He added that including the removal of pre-1970s TRU in the TPA is not something he expected DOE to agree to, but he agreed that it is a large, overdue public policy debate. John said they will discuss that at the next RAP meeting, but having the bullet in this piece of advice may be jumping ahead.

Discussion

Completing the settlement package prior to the lifecycle report

Susan Leckband asked if the Board wanted to advise the agencies to not sign the consent decree and TPA change package until the lifecycle report is available. She thought the Board's current position was unclear.

Pam supported the lifecycle report and analysis, but would not support advice that says a lifecycle report should be done before the consent decree and TPA modifications are complete. Harold and Ken Gasper agreed. Paige agreed and said the TPA agencies need to move forward with a signed consent decree. She thought the real goal of the advice is to offer advice points to strengthen the consent decree.

Barry Beyeler, Oregon Hanford Cleanup Board (State of Oregon), agreed that the TPA agencies should move forward with the consent decree and TPA modifications and the Board should be excited about this step for Hanford cleanup.

Laura Hanses, Non-Union, Non-Management Employees (Hanford Workforce), asked if the agencies have received comments from the public indicating that they should not sign the consent decree and the TPA change package. John said they have received some comments like that.

The Board agreed to advise the agencies to move forward and sign the settlement package with the proposed consent decree and TPA modifications even if the lifecycle report is not prepared.

Advice length and structure

Dick said he was overwhelmed by the length and volume of the advice. He said his main comment is to restructure the advice so the most important points are up front. He thought the background could be reduced to one page and the discussion points could be included as an appendix.

Harold said the advice is too long and contains extraneous material. He said the Board is supposed to issue policy-level advice, not how-to advice. He thought the advice section repeats itself and he said he could not support the advice as written.

Paige said the advice is far too long and did not think the advice was the right kind to get into the details for using a wiped film evaporator.

Gerry said DOE-ORP previously asked for more information about why certain advice points are stated and background information from past advice, so he asked the Board to consider striking a balance. He agreed that much of it could be moved to an appendix.

The advice was reorganized for better readability and clarity. Much of the background information was moved to an appendix titled “Discussion of Board advice on the proposed consent decree and TPA modifications” and key points were moved to the advice section.

Bulk vit

Pam said TWC heard that technetium is still a problem and the committee was frustrated with the money being spent on bulk vit without it proving to be a viable technology. She said it is far more costly than originally anticipated. She thought DOE should pursue starting the LAW facility early.

Keith agreed with Pam about bulk vit; he said the cost is growing and issues continue to surface. He did not think the technology was headed in the right direction.

Dirk said the State of Oregon will abstain from the advice because it is signing a separate consent decree with DOE. He agreed that DOE has gone beyond where bulk vit showed promise. Ken Gasper said TWC was appreciative when Shirley Olinger, DOE-ORP manager, said that DOE-ORP no longer planned to financially support pursuing bulk vit.

Rob said bulk vit is a dead issue and DOE should no longer consider it for use at Hanford. He said “early LAW facility startup” will get to a point where it will be irrelevant or it will take money away from other facilities. He supported early LAW facility startup, but said the longer DOE waits, the more meaningless “early LAW” becomes.

Barry said the Oregon Hanford Cleanup Board agrees that bulk vit is not going anywhere.

Rob asked if the Board could advise on Greater Than Class C waste – is that outside the Board’s charter? Paige said that the purpose of Hanford is cleanup, and if Hanford has not cleaned up the waste it already has, it should not take in waste from offsite.

Larry thought the Board should be cautious about throwing technology out the door (e.g. bulk vit) when it might be valuable for a different purpose in the future. He did not say bulk vit is the answer, but the Board should be careful and look at bulk vit’s readiness and alternative methods that could possibly support

cleanup in the future. He suggested modifying the language in the advice to focus more on reevaluating technologies that could be supported in the future.

Gerry said the State of Washington thinks that early LAW facility startup is the most prudent supplemental treatment technology. He said DOE should not delay supplemental treatment decisions because of bulk vit development. Gerry said the TC&WM EIS appendices show a huge impact to groundwater contamination and increased cancer risk due to the storage of offsite waste in burial grounds.

Suzanne Dahl, Ecology, said bulk vit is referred to in M-62-30. She said if the Board does not want to eliminate that milestone, it might want to suggest removing the part of it that refers to bulk vit. She said that milestone drives DOE to negotiate with the State of Washington other components of readying the site for WTP startup.

Dick said the available data shows that bulk vit is a “solution looking for a problem.” He thought there could be other applications, but not at Hanford. He said Hanford should not spend money to see what other potential uses may be.

Emmett asked if there has been an analysis of the risk of leaving those offsite wastes where they are – what risk does it pose in its current location versus the risk it would pose at Hanford? Gerry did not know and thought the majority of the wastes are yet to be generated.

Steve Pfaff said if DOE starts up the LAW facility early and the pretreatment facility is not ready, then they will spend substantial amounts of money and time to develop alternative pretreatment strategies. He said DOE has to consider such factors.

The advice was reworded to make clear that bulk vit should not be used as a reason for delaying the choice of a supplemental treatment. The Board decided to add language saying that bulk vit should be eliminated from draft milestone M-62-30. Harold supported the rewritten advice.

Jane thought the advice was much improved and said that key advice points are easier to find.

The advice was adopted. It will also be submitted as a public comment for the official comment record of the proposed consent decree and TPA modifications.

Tutorial on NEPA/CERCLA/RCRA

Craig Cameron, EPA, and John Price, Ecology, provided a technical and detailed overview of NEPA, CERCLA and RCRA. The following are excerpts from their presentation.

NEPA

- In enacting NEPA, Congress recognized that nearly all federal activities affect the environment in some way and mandated that before federal agencies make decisions, they must consider the effects of their actions on the quality of the human environment.
- NEPA’s goal is to balance environmental, economic, and social objectives in pursuit of "productive harmony" between humans and the environment. [42 U.S.C. §4331(a)]
- Categorical exclusions (CXs): DOE lists typical actions that would be excluded from the need to do an EIS (e.g. routine maintenance)
- Environmental Assessment: Finding of no significant impact, notice of intent to prepare an EIS, or no action
- EIS: Record of Decision (ROD)
- NEPA requires federal agencies to prepare an environmental impact statement (EIS) “for any major federal action significantly affecting the quality of the human environment.”
 - Local or state projects (including private commercial ones) get “federalized” by link to federal government. This link can be federal dollars.
- An environmental assessment that does not result in finding of no significant impact can trigger a subsequent EIS

NEPA oversight – external to federal agencies

- Council on Environmental Quality (CEQ) (www.whitehouse.gov/administration/eop/ceq/)
 - Three person council provides guidelines and adopts interpretive regulations
 - Nixon & Carter Executive Orders gave the council authority to establish regulations -- CEQ's role is still advisory
 - Agencies pass their own implementing regulations (US DOE's @ 10 CFR 1021)
- EPA reviews and rates the adequacy and completeness of EISs [see handout]

EIS analysis

- EISs must include a reasonable range and number of alternatives
- CERCLA remedial investigation/feasibility study (RI/FS) process and NEPA evaluation considered functionally equivalent
- Examples of NEPA values rolled into CERCLA feasibility studies
 - Transportation impacts
 - Air quality
 - Natural, cultural, and historical resources
 - Noise, visual, and aesthetic effects
 - Socioeconomic impacts
 - Environmental justice
 - Irreversible and irretrievable commitment of resources
 - Cumulative effects

NEPA and the TPA

- Section 5.7 of the TPA Action Plan, entitled “Integration with NEPA”
 - “The purpose of the NEPA requirements is to ensure that potential environmental impacts of investigation and cleanup activity are assessed. These assessments, when determined to be required, will be made primarily as part of the CERCLA response action and RCRA corrective action processes. These processes will be supplemented, as necessary, to ensure compliance with NEPA requirements.”

NEPA decision-making

- NEPA RODs do not have to select the most environmentally friendly alternative
 - Balance environmental, economic, and social objectives
- NEPA RODs are not enforceable
 - However, courts can rule that an inadequate evaluation (i.e., EIS) was done in response to third-party lawsuits
 - Also, requirement to perform EISs is generally enforceable - Supreme Court Calvert Cliffs ruling

NEPA and SEPA

- NEPA required for any major federal action (includes use of Atomic Energy Act (AEA) by DOE)
- SEPA requires consideration of environmental impacts to any part of the environment, making it Washington environmental statute that applies to almost every major action by state or local government

SEPA – when Ecology makes a decision

- Ecology considers environmental impacts and possible mitigation measures during Ecology decision-making (e.g. renewing Hanford Dangerous Waste permit is an Ecology decision)
- If adverse environmental impacts are identified in a SEPA analysis, Ecology can condition or deny a proposal to reduce adverse environmental impacts

SEPA – analyses at Hanford

- Environmental checklists are submitted to Ecology by DOE/contractor when applying for license (e.g. dangerous waste permit) or permit modifications
- Ecology performs a threshold evaluation of the proposed action

- If Ecology has enough information to determine that the permitting action is unlikely to have a significant adverse effect on the environment, Ecology will issue a determination of non-significance

SEPA – more significant proposals

- Ecology issues a mitigated determination of non-significance when Ecology conditions a proposal to mitigate possible environmental impacts (e.g. by adding permit conditions)
- If proposal is likely to have significant adverse environmental impact, Ecology may have to complete or adopt an EIS

SEPA – relationships between federal and state EISs

- DOE issued its draft TC&WM EIS (a draft federal NEPA EIS)
 - SEPA allows the use of NEPA documents to meet SEPA requirements (WAC 197-11-610)
 - Ecology is acting as a NEPA cooperating agency for the federal EIS
 - Ecology inserted a foreword that explains its roles, its agreements, and differences between Ecology’s position and the DOE’s

RCRA

- RCRA amended the Solid Waste Disposal Act (1965), and was amended by the Hazardous and Solid Waste Amendments (HSWA) in 1984
- “Cradle-to-grave” system for the management of hazardous waste; includes corrective action for prior waste disposal (similar to CERCLA)
- Administered by EPA federally; however, as in the case of the State of Washington, EPA can authorize a state program to operate in lieu of RCRA [Chapter 70.105 Revised Code of Washington (RCW), Hazardous Waste Management Act (HWMA) of 1976]
- RCRA requires a manifest system for the generation, transport, treatment, storage and disposal of hazardous waste and requires permits for the treatment, storage, or disposal of hazardous wastes.
- Contains a waiver of sovereign immunity. This means that federal facilities are subject to federal and state hazardous waste laws.
- EPA’s hazardous waste regulations are found in 40 CFR 260-281.

Definition of solid waste under RCRA

- ...means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility
- and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities,
- but does not include solid or dissolved materials in domestic sewage or irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880),
- or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).

Definition of hazardous waste under RCRA

- “...means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.”

“Listed waste” and “characteristic wastes”

- Hazardous wastes include listed wastes and characteristic wastes
 - Listed wastes are listed in 40 CFR 261 either by chemical name or as a named process stream
 - Characteristic wastes are those that exhibit reactive, corrosive, toxic, or ignitable characteristics

CERCLA

- 42 USC 9601 et seq.
- Amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986
- CERCLA and SARA provide for:
 - Remedial action at inactive or abandoned waste sites
 - Removal of spills of hazardous substances
 - The reporting of releases to the environment of hazardous substances, and
 - Natural resource damage assessments and liability
- A waiver of sovereign immunity appears in CERCLA. EPA’s regulations are in 40 CFR 300-302.

Definition of hazardous substance

- (A) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act,
- (B) any element, compound, mixture, solution, or substance designated pursuant to section 102 of this Act,
- (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act [RCRA] (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by Act of Congress),
- (D) any toxic pollutant listed under section 307(a) of the Federal Water Pollution Control Act [CWA],
- (E) any hazardous air pollutant listed under section 112 of the Clean Air Act, and
- (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to Section 7 of the Toxic Substances Control Act.
- Hazardous substances under CERCLA include RCRA hazardous wastes, as well as substances considered hazardous under the CAA, CWA, and TSCA.
- Radionuclides are hazardous air pollutants under the CAA so they are hazardous substances
- Oil and natural gas liquids are not hazardous substances

Responses

- Spill response does address oil and hazardous substances under the National Oil and Hazardous Substances Pollution Contingency Plan which is found in 40 CFR 300
- Responses under CERCLA include:
 - Emergency removal actions (overseen by on-scene coordinator)
 - Time-critical removal actions (e.g. spill response)
 - Non-time critical removal actions (e.g. engineering evaluation/cost analysis for public comment)
 - Remedial actions (e.g. proposed plan for public comment, RODs)

NPL sites and Superfund sites

- National Priorities List (e.g. preliminary assessment/site investigation, hazard ranking)
- Who pays: Superfund, potentially responsible parties, federal facilities (e.g. DOE)
- Federal Facility Agreement and Consent Order – TPA

Nine criteria for decision-making

- Nine criteria for remedial action alternative selection
 - Threshold criteria
 - Overall protection of human health and environment
 - Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) from other laws and regulations
 - Balancing criteria

- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume through treatment
- Short-term effectiveness
- Implementability
- Cost
- Modifying criteria
 - State acceptance
 - Community acceptance

Important concepts

- Remedial action objectives
- Site conceptual model
- Reasonably anticipated land use
- Exposure scenarios
- Baseline risk assessment (for final actions)
- Remedy construction and “operational and functional”
- Institutional controls
- Operations and maintenance and monitoring
- Five-year review

State’s role

- Workload sharing in TPA
- Use of Model Toxics Control Act (MTCA) as an ARAR and for RCRA corrective action

Site closeout

- For individual CERCLA operable units – final inspection and remedial action report or equivalent
- For NPL site (or a portion of an NPL site) – preliminary and final closeout reports and deletion from NPL, Hanford 1100 Area was deleted
- Closed RCRA units remain in post-closure portion of permit: if long-term monitoring required for residual contamination

Printed copies of the presentation were available at the back table as well as the criteria EPA uses to evaluate EISs.

Discussion

Pam commented that in the CERCLA modifying criteria, there is a category called community acceptance. She said she works for five communities and they have never been asked for community acceptance. She thought the agencies could ask for community opinions more often. Dennis said the statute was written using “community” in the broad sense. He said ultimately, the agencies want sustainable decisions that the public fully supports. Sometimes, the government has to make unpopular decisions, such as ones involving property rights. He said Moses Lake is an example where the community was unhappy, they took legal action, and now there is a better solution for the cleanup problem there. Matt added that the first seven criteria under CERCLA are technical, and the last two, including community acceptance, asks EPA to go beyond what is required technically. Pam commented that she wished they would consider local governments in a similar way they consider tribal nations.

Dirk asked when a material is considered source material and when is it considered waste and subject to CERCLA. He said for example, sometimes depleted uranium is viewed as source material but there has not been any official action to define it as source material. Dirk also said many sites are regulated by multiple regulations, what are the triggers about what applies and when? John said regulations such as CERCLA and RCRA apply at the same time. DOE has two types of authority, under AEA and CERCLA. He said DOE does not have authority under RCRA or state dangerous waste regulations. He said what is under the state’s authority ends up being requirements for DOE. The TPA reconciles overlapping and sometimes conflicting requirements. Earl Fordham, Washington State Department of Health (Ex-Officio), commented that material is often classified by its last practical use.

Doug said litigation over NEPA EISs is typically about whether or not the analysis is satisfactory. He thought there should be a similarly robust checklist and process for public participation, and the consequences of not adequately achieving the public participation purpose. He wanted to know if doing the checklist is enough even if it does not work and the agencies know it does not work. How can it be changed?

Woody Russell, DOE-ORP, said there is not a checklist for public participation. DOE selects public involvement activities to engage and encourage stakeholder participation. Doug commented that PIC might want to develop advice about how to reinvigorate public involvement and evaluate the standard operating procedures. He thought PIC should investigate potential institutional barriers to changing the public involvement process. Woody said they are more than willing to entertain ideas and ways to improve stakeholder involvement. He added that he finds constructive input valuable when it focuses on evaluating uncertainties, analysis flaws and the failure to consider alternatives; he said that is the whole purpose of NEPA.

John said the agencies do not want to look at public involvement “in a box” and limit it to a comment period, for example. He said EIS public participation starts with scoping the EIS, which is one of the reasons Ecology and the other agencies stay so involved with the HAB so it can participate from the very beginning.

Doug said the protectiveness of remedies at Hanford depend on analogous sites around the country using institutional controls, for example. How active is and can DOE and the TPA agencies be active in sharing long-term stewardship successes and concerns on the national level? Doug said he wanted to know if institutional controls are working at another site and how to find that information. Craig said there is a national tracking system for institutional controls; he was not sure how it is posted publicly, but he will find out.

Overview of the TC&WM EIS

Mary Beth Burandt, DOE-ORP, provided an overview of the draft TC&WM EIS that is currently out for public comment (October 30, 2009 through March 19, 2010). She described the presentation as “from the 50,000 foot level” because the EIS so complex.

Public comment information

- TC&WM EIS notice of availability was published in the federal register on October 30, 2009.
- Public comment period is 140 days, ending March 19, 2010.
- Specific dates and times for public hearings have not been scheduled yet.
- A federal register notice (and press releases, listerv notices, etc) will announce the dates, times and locations of public hearings.

Decisions supported by the TC&WM EIS (read in conjunction with the preferred alternative write-up)

- Tank waste treatment and closure
 - Retrieve and treat tank waste (including supplemental treatment)
 - Closure of single-shell tanks
- Fast Flux Test Facility (FFTF)
 - Decommission facility and support structures – Mary Beth said the EIS does not discuss restarting FFTF
 - Disposition of bulk sodium inventory
- Waste management
 - Expansion or upgrade of existing TSD capacity
 - Disposal of waste from tank treatment, closure and FFTF activities
 - Potential disposal of waste from other DOE sites

Decisions not made by the TC&WM EIS (but included in the analysis)

- Double-shell tank closure: Due to barrier placement 28 double-shell tanks are assumed landfill closed in EIS analysis, but no final decision is made.
- WTP closure: WTP is assumed deactivated in EIS analysis but no final decision is made.

- CERCLA groundwater remediation
- CERCLA past practice units: Six sets of cribs and trenches are either closed in place or removed in EIS.
- FFTF deactivation: Covered under existing NEPA in 1995, 2000, and 2006. Mary Beth said they are not reopening the decision.
- Disposition of cesium/strontium capsules: Processes them through WTP but no final disposition decision is made.
- High-level waste transportation and disposition: This EIS does not address the disposition of high-level waste canisters and their transportation.

Key findings

- Retrieval
 - The amount of retrieval influences long-term human health impacts; Mary Beth said the EIS finds that “retrieval matters.”
 - Ancillary equipment, residuals, and retrieval leak losses influence things to a lesser degree.
- Tank waste treatment
 - Primary waste forms: Technical maturity is evident in the analysis
 - Secondary waste forms: Additional treatment or waste form development may be needed for secondary waste to capture I-129, Tc-99 or other constituents if needed.
- Closure of six sets of cribs and trenches
 - Cribs and trenches are major contributors to potential long-term groundwater impacts for all tank closure alternatives.
 - Past leaks are major contributors to potential long-term groundwater impacts.
- SST closure (for drinking water well user)
 - Clean closure does not show reductions of I-129 and Tc-99 below the benchmark concentrations for at least the first 2000 years due to the impacts of past leaks and cribs and trenches.
 - Partial removal of two tank farms (BX and SX) does show some reduction in risk but not below benchmarks.
- FFTF
 - Inventory and impacts are relatively small compared to the other proposed actions
- Waste management
 - Differences exist between 200 East and 200 West disposal locations
 - Off-site waste analysis shows Tc-99 and I-129 are contributors to impacts.
 - Secondary waste is a concern whether or not off-site waste is added to it.

Preferred alternatives (17 alternatives and two sub-options)

- Tank retrieval, treatment and closure
 - DOE does not prefer the “no action” alternative for the three program areas.
 - Tank waste retrieval: DOE prefers retrieval to 99%
 - Tank waste treatment: DOE prefers treatment which allows for segregation into the high-level and low-level waste fraction but has no preference on supplemental treatment
 - Single-shell tank closure: DOE prefers landfill closure for the following reasons
 - Balance of short term impacts versus long term risk.
 - Waste volumes generated which would be disposed on site
 - Technical uncertainty of removal
- FFTF
 - DOE prefers entombment which removes above grade structures.
 - Below grade structures, reactor vessels, piping and other components remain in place.
 - Remote-handled special components would be treated at Idaho.
 - Bulk sodium would be processed at Hanford.
- Waste management, DOE prefers:
 - On-site generated waste would be disposed of in the expanded IDF East facility
 - Disposal of closure waste would be disposed of in a new River Protection Project disposal facility

- Moratorium on off-site waste remains in place until WTP is operational.

Ecology and DOE's perspectives

- Ecology and DOE agreed on many areas of analysis
 - Groundwater data and information
 - Quality assurance requirements
 - Technical guidance document
 - Overall approach to vadose zone and groundwater modeling
 - Waste form release mechanisms
 - Alternative descriptions and alternative analysis
- Areas of differences
 - I-129 partitioning to secondary waste
 - Timing of decisions related to supplemental tank waste treatment options. Mary Beth said there is no preferred alternative for supplemental treatment.

For general information on this Draft TC&WM EIS or a copy of the draft document, please contact:

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Regulator perspective

Suzanne said Ecology is happy that the TC&WM EIS is now available and thinks it will help educate the agencies as they make upcoming decisions. She thought the EIS points out risks at Hanford in a fair manner, which she said was a courageous and appropriate thing for DOE to do. She looks forward to public comments, especially on tank closure and waste management. Suzanne said Ecology had three options for how to be involved in the EIS; it could have been an affected agency and sat on the sideline and commented as anyone else, it could have coauthored the document, which would have made it a SEPA document as well, or it could have taken the middle road as a cooperating agency, which is what Ecology chose to do.

Suzanne said as a cooperating agency, Ecology was involved in scoping and developing alternatives, looking at data sets and models, and conducting a preliminary review with DOE-HQ. She said they hired a contractor to look at the groundwater and vadose zone modeling and issue a report for Ecology. Suzanne said throughout the process, they did a series of quality assurance slices by taking an issue and following it through to the data source, through modeling, results and writing. She said they and DOE resolved many issues along the way. She said the draft document is technically sound and addresses the issues fairly.

Suzanne noted that the Board and the public can learn what Ecology thinks by reading the foreword in the draft TC&WM EIS and the focus sheet. Ecology will also describe some of the big picture perspectives, and pull out the interesting details that lead them to prefer one alternative over another. Suzanne said they will have that type of information available at the public meetings and in materials. She noted they will revise the foreword for the final version; Ecology has the option of adopting all or part of the EIS.

Suzanne reviewed some of Ecology's general values, such as removing as much waste as technically possible (do not stop at 99% retrieval if more can be achieved). She said vitrification is better than other supplemental treatment options, and commented that she is unsure why DOE has not selected vitrification as the preferred alternative because the information in the TC&WM EIS shows that vitrification is best. She thought all low-activity waste should be vitrified if possible instead of dealing with a secondary waste stream. Suzanne also noted that Ecology believes importing offsite waste will have a significant impact.

Dennis said EPA has not significantly participated in the TC&WM EIS development process. He challenged the Board to focus on the policy issues when reviewing the EIS. Dennis said he had not read the EIS yet, but he commented that Hanford should invest in technology development. He said the deep vadose zone on the Central Plateau is “the new frontier” and a big public policy issue. Procedurally, EPA had a rating system for EIS adequacy. Dennis said his staff will review it from a technical perspective.

Discussion

Mike Korenko said FFTF is an emotional topic for many people. He asked if it is possible to delay the execution of decommissioning FFTF. He said two factors contribute to that – the fact that Yucca Mountain might not be used as the repository site and the possibilities of applying technologies being developed in China in the U.S. through FFTF. Mary Beth said the TC&WM EIS assumes that dismantling activities will occur by a certain date. She said impacts change if dismantling occurs earlier or later. Mike asked if DOE ultimately decides to decommission FFTF, do they have the flexibility to delay it for five years. Mary Beth said that is a project call. The TC&WM EIS will provide the analysis, but schedule is a project decision. Dennis added that basically yes, there is flexibility in the timeframe for dismantling.

Dick said if DOE will not make a decision on CERCLA groundwater remediation, did they include that in the TC&WM EIS? Mary Beth said modeling a pump and treat system is challenging, so in some cases they assumed in modeling that pump and treat was occurring. She said short and long term impacts of CERCLA activities are evident in cumulative impacts. She said they add up all those activities and apply them to different scenarios in the TC&WM EIS.

Pam asked why CERCLA groundwater decisions are not part of the TC&WM EIS. Dennis said they did not want DOE to issue a ROD under NEPA when they had the jurisdiction under CERCLA to do so. EPA thinks groundwater should be cleaned up under CERCLA. Suzanne added that permitting decisions are made by the State of Washington. Matt noted that DOE uses NEPA to make certain decisions under AEA to cover radionuclides. If there is residual contamination in tanks after closing them, RCRA closure does not cover radioactivity, but the ROD under NEPA does.

Pam asked if the TC&WM EIS contains all the groundwater modeling information needed to clean up groundwater. Matt said no. Dennis said the EIS will help inform groundwater cleanup.

Dirk asked if the TC&WM EIS discusses fundamental assumptions, such as institutional controls and long-term stewardship. Mary Beth said assumptions and technology uncertainties are found throughout the document. She said after a technical section describing a particular unit or modeling, DOE tried to state its assumptions and technical uncertainties. She said they tried to make it so readers do not have to flip back to an appendix to find assumptions.

Floyd Hodges, Citizens for a Clean Eastern Washington (Regional Environmental/Citizen), said a technology will be needed to be protective for a very long time if DOE does not remove deep contamination in the vadose zone now. Mary Beth said the EIS is trying to show effects of cleanup (or no cleanup) at Hanford. She said then they can look at the analysis and decide if the current path is one on which they want to stay.

Hiring a technical expert

A self-selected group of Board members with technical backgrounds is working on a scope of work with DOE to hire a technical expert as soon as possible to assist the Board with reading, understanding and commenting on the draft TC&WM EIS. Rob said the value will be around \$50,000 and will roughly be for five weeks of work. The Board will develop its own advice and comments on the TC&WM EIS. Dick added that the original scope of work was too big, but they were able to cut it down to a doable level. The main deliverable is a report that will contain an analysis of the remediation alternatives examined in the TC&WM EIS. The Board will be able to see how well the alternatives match up with Board positions on treatment. Board members were provided with a copy of the draft Statement of Work. The Board did not need to reach consensus on the draft scope of work, but Susan Leckband said Board members could contact her if they have any comments on it.

Susan Leckband said the Board's opportunity to provide advice on the TC&WM EIS is at the February Board meeting because the comment period ends on March 19. She clarified that individuals can comment up until the end of the comment period. Susan commented that there may be a need to have a COTW meeting in January. She said the report will be developed with Board values in mind and will be readable for the general public.

Dick commented that it would be ideal to have the COTW meeting prior to the joint RAP and TWC technical committee meeting scheduled in January.

Rob said the Board and the public provided many comments on the previous Solid Waste EIS – where can the public view those past comments? Mary Beth said the comments on the Solid Waste EIS and agency responses will be available in the comment response document that will be published with the final TC&WM EIS. She will see if she can provide a summary of those comments.

Keith thought the list of advice having particular relevance to the TC&WM EIS found in the draft scope of work should include waste disposition in the canyons and PUREX tunnels. Jeff said the Board will be able to tell the technical consultant more specifically what they should review. Susan Leckband agreed and said that piece of past advice could be identified in the draft scope of work.

Pam added that the consultant should also review Ecology's analysis of the Solid Waste EIS and DOE's response to Ecology.

Doug asked about the standards of expertise the Board and DOE are requiring for the technical consultant. Susan Leckband said this was addressed in the draft scope of work, and Board members were encouraged to nominate candidates for the position.

Doug thought the deliverables needed more clarity. Susan said they will meet next week to further develop the scope and to work with DOE to hire someone soon.

Emmett asked if the funds for this consultant will come out of the Board's budget. Susan said no. Emmett asked why the Board feels hiring a technical expert is needed. Susan said the Board decided they needed assistance with understanding the TC&WM EIS at a policy level. Emmett thought it was good the expert will review it the policy level. He said nothing in an EIS is enforceable, and he had doubts about the technical quality of the document. Jeff said that is why the Board decided to not conduct a technical evaluation, and is not challenging or questioning the analysis. The Board will look to review and provide advice at the policy level, but individuals may comment however they want. The statement and scope of work is going forward next week.

TPA agency update

DOE-RL

Matt provided an update for DOE-RL. Matt said significant progress has been made to reduce environmental risk and eliminate some of the most urgent risks:

- Moved 2,300 tons of corroding spent nuclear fuel dried, to safe storage in the Central Plateau
- Stabilized, packaged and shipped off site 20 tons of unstable plutonium in various forms
- Treating 50 million gallons of contaminated groundwater each month
- Retrieved 50,000 out of 70,000 drums worth of solid, radioactive waste (TRU)
- Demolished 196 out of 625 facilities along the Columbia River, 5 of 8 reactors placed in interim safe storage
- Cleaned up 451 of ~800 waste sites along the Columbia River
- Disposed of 8.6 million tons of waste in Environmental Restoration Disposal Facility

Matt described key pieces of work for the coming years.

- 2011
 - Retrieve an additional 12,000 drums worth of solid, radioactive waste (mostly in boxes).
Matt said they have already removed about 10,000 drums.

- 2012
 - Treating more than 200 million gallons of contaminated groundwater each month (due to new treatment systems in 100 and 200 Areas). Matt said the new 200 West pump and treat system significantly increased their ability to treat groundwater; they used to be able to treat only 40 to 50 million gallons a month.
 - All chromium in groundwater near Columbia River contained
- 2013
 - PFP demolished to slab on grade. Matt said PFP poses the largest risk of DOE-RL managed facilities for spreading contamination in a seismic event.
- 2015
 - Treatment system in place to address uranium in groundwater near Columbia River (in 300 Area). Matt said it has been difficult to sequester uranium contamination.
 - Nearly all of 625 facilities along the Columbia River demolished; 6 of 8 reactors placed in interim safe storage
 - Nearly all of 800 waste sites (approximate number) along the Columbia River cleaned up
 - Cleanup of Central Plateau Outer Area nearing completion. Matt said cleanup levels are comparable that of the River Corridor and land use will be unrestricted. Approximately 100 waste sites cleaned up, excess facilities demolished, and Hanford's cleanup footprint reducing to approximately 10 square miles (less than two percent of original Hanford Site cleanup footprint)
 - Treatment systems are in place and groundwater contaminants are contained to the Central Plateau (and being remediated)
 - Shift full-scale cleanup effort to the Inner Zone of the Central Plateau (approximately 10 square miles in the center of the Hanford Site)
- 2016
 - All strontium-90 in groundwater near Columbia River contained

Matt showed images of the 2015 Vision and how the site footprint will be shrunk. He described the Central Plateau cleanup strategy and said as with the River Corridor, DOE needs to keep the momentum and sustained funding to move straight into Central Plateau cleanup. Central Plateau cleanup is focused in three areas:

- Inner Area: Final cleanup footprint (will be less than two percent of the original site)
- Outer Area: Remediate to unrestricted surface use; cleanup standards are comparable to River Corridor
- Groundwater: Contain and remediate key groundwater contaminants

Matt briefly reviewed ARRA funding and goals. Hanford received approximately \$2 billion from ARRA. Matt noted that 5,179 jobs have been saved or created at Hanford with ARRA funding. He described that as "lives touched" by ARRA funding and said the Board could find more information about ARRA at www.recovery.gov. Matt also showed two tables describing the metrics for ARRA funded work, such as the number of glove boxes removed from PFP (through 9/30/2009 and the total target).

ARRA highlights include:

- Decontamination and decommissioning (D&D) work at Plutonium Finishing Plant (PFP): 22 glove boxes or laboratory hoods removed from main building (234-5Z)
- ARRA funding will help DOE complete demolition of PFP three years early (by 2013); Matt said removing and shipping plutonium from vaults will make it much easier and efficient to demolish the building.
- 200 West Area Pump and Treat Facility
 - Installing wells for new groundwater treatment system in 200 West Area (pumps at 2,500 gallons/minute)
 - \$80 million in ARRA funding allows design and construction of treatment facility to occur in one phase instead of two
 - Facility will reach full operating capacity 5 years earlier, potentially saving \$25 million in life-cycle costs
 - Creating 100 construction jobs
- Finished retrieving last 300 of 1,300 deteriorating drums and containers (with potential TRU waste) from concrete vaults in 200 West Area

- ARRA funding kept experienced workers on the job

DOE-ORP

Steve Pfaff provided an update for DOE-ORP. He said Guy Girard is the acting assistant manager for WTP. Steve's presentations showed many photographs of DOE-ORP's work on site.

Steve reviewed where and how Board members and the public could comment on the draft TC&WM EIS.

- Draft Tank Closure & Waste Management Environmental Impact Statement is available at www.hanford.gov/orp/?page=216&parent=146
 - Comment period: October 30, 2009 – March 19, 2010
- Proposed consent decree and TPA modifications are available at www.hanford.gov/hanford/files/CAL_TPA_Change_Packages.pdf
 - Comment period: October 1 – December 11, 2009
 - Upcoming public meetings (three have already been held)
 - November 9: Doubletree Hotel Spokane City Center - Salon A&B
 - November 12: Quality Inn & Suites Seattle Center - Olympic Room

Steve reviewed the status of various cleanup activities. WTP is 50% complete. Pretreatment ventilation systems are being installed at the pretreatment facility. Walls are constructed up to 77 feet and will be 120 feet tall. Walls are assembled on the ground and lifted up by crane to be tied in by iron workers.

- Pretreatment
 - Design - 77%
 - Construction – 27%
 - Total – 47%
- High Level Waste
 - Design – 82%
 - Construction – 23%
 - Total – 47%
 - Wall height will exceed 90 feet
- Analytical Lab
 - Design – 79%
 - Construction – 55%
 - Total – 47%
- Low Activity Waste (completely enclosed, working on the interior)
 - Design – 91%
 - Construction – 56%
 - Total – 67%
- Balance of Facilities
 - Design – 78%
 - Construction – 55%
 - Total – 52%

Steve said since construction began, they have used more than 200,000 cubic feet of concrete, 14,000 tons of steel and 340,000 feet of piping.

Steve provided an ARRA status update:

- 583 full-time employees for the month of September
- Approximately \$31.8M spent to date
- Contract defined and baseline implemented
- All fiscal year 2009 contract milestones were completed on time, including:
 - Removal of 242-A evaporator compressors
 - Removal of SY farm P-28 exhauster
 - Update a 222-S laboratory stairway to code

Steve updated the Board on C-104 retrieval. Steve said they tried to start working on this tank in 2002 but it proved too time consuming and they decided to tackle other tanks first. Construction is complete on the retrieval system and they expect to start retrievals on November 16. Crews will retrieve 259,000 gallons of sludge to be retrieved. After C-104, they will begin removing old equipment from C-111.

Steve showed a video of the Mobile Arm Retrieval System (MARS), a system that will be first used in C-107 later on in retrievals. Steve said typically, they usually use modified sluicing to move waste toward the center of tank to a pump for removal. This retrieves about 85-90% of the waste but cannot remove the hard heel. MARS solves this problem by using a rake to scrape waste to the pump; it was cold tested starting in 2007 and works. Many simulants were used to represent dense waste, sludge and hard heel. MARS uses a telescoping arm that can rotate 360 degrees and extend 37.5 feet and a nozzle that fires liquid at 5,000 pounds per square inch (psi). For leaking tanks, Steve said they will use confined sluicing by spraying the liquid and vacuuming it up immediately. He said this will be more efficient than in the past because there will be a temporary side storage space near the tank.

A 42" hole will be cut in the tank to accommodate the MARS arm; they tried a longer arm but it lost strength with the increased length. Steve said they are looking at cutting methods and how to cut remotely.

Steve said 1.7 million hours have been worked at WTP since July 2009 without a lost-time injury.

Ecology

Jane thanked Board members for attending public meetings for the proposed consent decree and TPA modifications and providing comments. Jay Manning, director, is leaving Ecology to become the governor's chief of staff. Polly Zehm is the interim director of Ecology until the position is permanently filled. Jane noted that they will not fill Nolan Curtis' old position, and now the public involvement staff will be working directly in the technical section. Madeleine Brown, Annette Carlson and Ginger Wireman will still support Board activities. Dan McDonald is the new tanks group project manager.

Ecology issued the fifth edition of the RCRA site-wide permit FAQs. Jane added that the focus sheet for the TC&WM EIS is available. She noted that Mary Sue Wilson, attorney general's office, wrote up a description of the proposed consent decree for the COTW and copies were available.

The comment period for the AREVA facility permit is November 2 – December 16. The AREVA facility produces nuclear fuel for commercial reactors. The permit covers the storage of mixed waste from operations. Jane said it is a very small facility with little waste.

EPA

Dennis said administrator Lisa Jackson is starting to appoint regional administrators, and he hoped Region 10 will have an administrator soon. He said EPA is adding some staff to oversee ARRA work with funding provided by DOE. Three new employees are working at Hanford and the Idaho National Laboratory (INL). Dennis said EPA is working on RI/FSs for work along the Columbia River. He said up until now, most of the work on the river has been completed under interim actions and has only targeted specific contaminants. Final actions will deal with all contaminants in groundwater. There will be a technical workshop in a couple weeks.

Dennis said shrinking the site and moving off the river by 2015 is a good goal. He said the strategy for cleaning up the 200 Area has been on the Board's work plan for many years; it is a tough issue.

Discussion

Mike Korenko said the community is very happy with cleanup progress, but are concerned since completing the site cleanup translates into lost jobs. He asked if DOE has employment projections 10-15 years in the future so the community can plan and bring in alternate business. Matt said they do not have an estimated headcount, but they do have projected funding for future cleanup, which could be translated through various formulas into a headcount. He said they need robust funding over the next 10-15 years to

retrieve tank waste and treat waste. Mike thought projected funding is enough information and thought it would be useful to publish projected funding so people do not worry about employment in the near-term.

Paige asked once the site is shrunk to the Inner and Outer Areas, will the rest of the site be open to the public? Matt said the plan is to remediate the Outer Area to unrestricted surface use. Dennis added that the emphasis will shift from the river to the Central Plateau and the chances of unrestricted access to the river will go down. He said getting off the river by 2015 is a good goal, but he said the Board should not have the impression that all cleanup work will be complete by that time.

Paige asked if the 300 Area is being considered for industry. Matt said PNNL will have a continued presence but was not aware of any other initiatives or requests to use that area for other industries.

Paige asked about the ARRA category "lives touched" and what it means. Matt said it is about looking at jobs created by ARRA and how that indirectly affects lives.

Norma Jean Germond, Public-at-Large, asked about N Reactor and strontium-90. Matt said they are nearing completion of demobilization facilities around the core of N Reactor and will place that reactor in interim safe storage. The contractor has removed most of the facilities that supported N Reactor operations and are down to the main facility that houses the reactor core. Matt said they expanded their in situ treatment and are using an apatite barrier to treat the strontium plume associated with N Reactor.

Norma Jean asked about the above ground waste transfer types at WTP. Steve Pfaff said hose-in-hose transfer lines are used between single-shell tanks and double-shell tanks. The hose lays in a trench and is covered with a shield or steel blocks. He said it is a cost effective method for short term retrievals (less than a year). He said they are looking at using ARRA funding to bury permanent pipes between double-shell tanks to allow long-term transfers to WTP.

Emmett asked if a fact sheet was available about the 200 West pump and treat system. Matt said yes and copies will be available in the afternoon.

Emmett asked if N trenches are the source of the strontium-90. Dennis said yes.

Emmett asked if the AREVA program is regulated by NRC and the Washington State Department of Health. Jane said yes; Ecology only manages the one small facility.

Dirk asked as more retrieval work begins, how will decontamination procedures be managed for exposed workers? Steve Pfaff said they already have decontamination trailers and ARRA is funding four more trailers to locate nearby the work sites.

Barry asked if DOE has concerns about tank integrity if workers cannot see through the hard heel to the tank wall. Is there an audio feed from inside the tank in addition to a video feed? He thought that would help the operator. Steve said they tested and confirmed that 5,000 psi would not damage the tank. He said they need to work on developing the vacuum component for the leaker tanks to reduce the risk of release. He said that will be a challenge. Steve said they do not have plans to install microphones in tanks, but will have two or three cameras operating at one time. MARS is designed with safety measures to prevent tank damage, such as being designed to stop if there is a spike in arm hydraulic pressure.

Keith appreciated seeing how ARRA funding is spent. He said he will help get the word out to show the public what the extra money achieves.

Larry asked if statistics about jobs created/saved for contractors were available. He thought it would be beneficial to share with the public. Matt said they could construct that once the FY 2012 budget is prepared.

Larry asked about an incident on site involving a crane. Matt said a crane released a cable and a case with spent fuel fell one foot or less to the ground. Lampson International (a crane company) investigated the crane and interviewed the operator. Matt said the report was just finalized and DOE is reviewing potential corrective actions.

Larry asked how long MARS simulant was put in place, sitting until cold test retrieval was tested. Steve said they poured a pad of low strength grout and let it cure for a couple weeks; the high pressure nozzle shot through it a few inches per second. They used a variety of simulants, including heavy sand iron hematite material to simulate C-110. Steve said they believe the test was representative.

Dick said \$2 billion ARRA funding is a significant part of the total operating budget, and he did not see how DOE could avoid a dip in funding at the end of the ARRA period. Matt said he does expect a dip in funding for 2011-2012 and they are working with DOE-HQ about the size of the reduction and how they will mitigate impacts to the workforce. Steve added that DOE-ORP will need retrieval crews ready when WTP starts up.

Rob asked if the Board should prepare advice about MARS. He said they have had several questions, including how WTP will treat garnet residue that may accumulate inside the tanks from cutting the hole for MARS, and if DOE should look at the stress that MARS will place on the top of each tank. Steve said DOE would welcome any advice about MARS from a systemic standpoint. He said garnet is a mineral commonly used in cutting operations and is easy to obtain. As the cutting jet water/garnet mixture cuts the MARS hole through the tank, the garnet would be pulverized and end up in the waste mixture inside the tank. He said there are a couple different options for cutting, but they are not as desirable. PNNL is analyzing the weight load on tanks and an independent engineer provides certification any time DOE installs transfer systems. Susan Leckband thought TWC could further discuss the issue.

Liz Matson, Hanford Challenge (Hanford Workforce), asked if there were “no lost time” injury incentives for the contractor. Steve did not know. In the past, contractors had used a program where workers received a bonus if they met safety and productivity goals. Steve said as the work progressed and became more difficult, there were more safety issues and Bechtel decided that the bonus approach should be discontinued. Steve commented that the effect of money on injury reporting is not desirable, and there are no such incentives at tank farms.

Liz asked what DOE was doing to emphasize honest reporting. Steve said it would be very difficult for a worker to hide an injury, and said it was critical for workers to report injuries so DOE can better understand working conditions and make necessary improvements. He had not found any reluctance to report injuries in the tank farms.

Central Plateau cleanup completion strategy and Sounding Board

The Board received a copy of draft framing questions and answers generated during the Central Plateau cleanup completion strategy COTW on October 29. Susan Hayman encouraged the Board to review them prior to the Sounding Board.

Pam said many people attended the COTW meeting. RAP was glad that DOE developed a strategy because it felt a framework was needed for consistent decision-making. Pam said the committee will probably develop draft advice on the issue. She said the committee also decided that the Board should do a Sounding Board to provide quick, rapid feedback to DOE today.

Dale Engstrom, Oregon DOE (State of Oregon), Wade Riggsbee, Yakama Nation (Tribal Government), and Pam are the issue managers.

Matt provided an abbreviated version of the same presentation given at the COTW meeting to ensure all Board members hear the same information to help them develop their comments for the Sounding Board. The Board will continue to work on this issue.

Matt reviewed the basis for the strategy and its key elements. He looked forward to understanding the Board’s comments and questions.

Purpose and need of a Central Plateau vision and strategy:

- 2015 Vision is to shrink active cleanup footprint to 75 square miles in the Central Plateau

- Establish a vision for what the Central Plateau looks like when cleanup is done
- Establish a comprehensive strategy to replace current approach of operable unit by operable unit (e.g. individual decisions)
- Establish goals, objectives and consistent principles to guide cleanup decisions
- Provide basis for future funding requests

Matt said the strategy will help provide a basis for and be used in future funding requests. He said DOE needs to show a comprehensive view of Hanford cleanup to Congress and how it protects human health and the environment.

The strategy will:

- Shrink the Hanford Site cleanup down to the smallest practicable Central Plateau footprint
- Protect human health, ecological resources and groundwater

Central Plateau cleanup is focused in three areas:

- Inner Area
 - Final footprint will be less than 2% of the original Hanford Site; will require long term management
 - Approach:
 - Minimize the size of the area requiring long-term management (the final footprint)
 - Configure waste and residual contamination to be protective of human health and the environment
 - Make comprehensive, consistent cleanup decisions with guiding principles
 - Implement cleanup decisions using a geographical approach
 - Monitor inner area to ensure cleanup remedies are protective
- Outer Area (over 55 square miles)
 - Remediate to unrestricted surface use (cleanup standards comparable to the River Corridor)
 - Approach:
 - Clean up waste sites (about 180) comparable to the River Corridor with some exceptions
 - D&D excess facilities
 - Make final cleanup decisions with one ROD
 - Start cleanup work with interim decisions using ARRA funds
 - Will be cleaned up in the 2015 timeframe
 -
- Groundwater
 - Contain and remediate key groundwater contaminants
 - Contain key contaminants (carbon tetrachloride, technicium 99, uranium) to the Central Plateau and remediate to meet drinking water standards
 - Complete groundwater remediation decisions on the Central Plateau using 200-ZP -1 as template
 - Implement pump & treat systems in next few years to continue to contain key contaminants

Matt said the Central Plateau cleanup completion strategy reflects input received from tribes, the Board and other stakeholders over a number of years. DOE heard additional feedback at the COTW meeting, including requests for additional discussion on burial grounds, overall Central Plateau priorities and guiding principles (e.g. exposure scenarios and ecological protection). Matt said they also received positive feedback on the interactive tool and will put it on the website.

Matt said the agencies will now enter into collaborative discussions for the draft TPA changes packages that implement the strategy. Meaningful tribal consultation, stakeholder and public involvement will continue throughout Central Plateau cleanup decision-making processes and implementation. He noted that the RODs make decisions for the Central Plateau, not the strategy. There will be continued opportunities for comment on Central Plateau decision-making.

Regulator perspective

Dennis said EPA is happy that DOE committed to cleaning up the Outer Area to River Corridor cleanup standards. He said 200-ZP-1 paved the way and they should continue cleaning up groundwater to the best of their ability.

Dennis said the Inner Area is more difficult and is the focus of regulator discussion with DOE right now. In the past, with the Exposure Scenario Task Force and end states discussions, the Board drafted Advice #132. EPA's response to that set out the framework for how EPA wants to approach the Inner Area. EPA made the assumption that waste management and active cleanup would continue until approximately 2050. Dennis said up until now, there were discussions about 100 year active institutional controls, followed by passive institutional controls. He said the new strategy asks the regulators and the public to entertain continuous waste management in a 10 square mile area for the foreseeable future. DOE is proposing that this continuous waste management area would continue to be owned by DOE and managed in perpetuity by institutional controls. Dennis said DOE is asking the regulators to entertain new exposure scenarios, such as a surveillance and maintenance worker and a motorcyclist, to set threshold criteria and cleanup levels.

Dennis said EPA would like feedback on those issues, as well as the mechanics of making decisions based on geographical area. He said DOE is proposing fewer decision points (e.g. fewer RODs) and EPA has not yet decided if that is good or bad. Is it better to have smaller, discrete decisions, or have fewer, more comprehensive decisions? Dennis thought they should be cautious about making decisions that DOE and the regulators might not be ready to make. He did not think there was enough information today to make sound decisions about burial grounds, for example.

Ecology

John commented that there is recognition amongst the agencies that burial ground decisions need their own forum. Regarding waste management areas, John said Ecology has stated that it is comfortable with milestones about investigations and releases at tank farms. Ecology is also comfortable with the regulatory framework for investigations and closures of waste areas. He said a good outcome of the Central Plateau negotiations is that Ecology will get responsibility for the area around waste sites, which will help streamline regulatory processes and eliminate confusion. He looked forward to reviewing the draft TC&WM EIS.

Pam asked if DOE was looking for comments on any particular issues. Matt said there is definitely a need for a strategy and wanted to know if everyone could agree on breaking down cleanup into the three geographical areas. He thought they would reach agreement on the Outer Area and groundwater, but the Inner Area will be the most difficult to agree upon.

Pam asked if the deep vadose zone fits in the groundwater strategy. Matt said no, the groundwater strategy deals with groundwater that is contaminated now. DOE needs to develop technologies to deal with the deep vadose zone and will focus on containing contamination until a technology is developed for treatment.

Sounding Board

Each Board member was given two minutes to speak about DOE's Central Plateau cleanup strategy. Board member alternates were offered the opportunity as well. This summary of the Sounding Board will be given to the TPA agencies. DOE committed to reviewing and considering the comments when revising the strategy. EPA and Ecology also committed to reviewing the comments prior to negotiations with DOE on Central Plateau TPA milestones. There will be a public comment period after the agencies negotiate proposed changes to Central Plateau milestones.

This is only a summary of the Sounding Board; comments are not recorded verbatim. Those members or alternates not identified as providing comment during the Sounding Board either declined to provide comment or were not present.

Round 1

Emmett Moore, Washington State University (University)

Emmett said 2015 is a good goal and DOE should keep it, but should not “cast 75 square miles in concrete.” The cleanup area may be larger. He applauded the new 200 West pump and treat groundwater system and thought more systems may be necessary. He said pump and treat systems do not accomplish everything, and pumping may have to occur for a long time.

Keith Smith, Public-at-Large

Keith applauded DOE’s Central Plateau cleanup strategy presentation. He said the process and presentation shows how the Board’s relationship with DOE is much improved. Keith said it is not as difficult to get information from DOE now. He asked DOE to consider more scenarios for long-term stewardship for the burial grounds and other areas, including a motorcyclist, a worker, ATV and Bigfoot Trucks users. Keith said DOE should also consider a scenario where an airplane crashes into a cap – caps do not last forever. He applauded DOE for moving forward with decision-making and being transparent. He said it will help make for better decisions.

Ken Niles, Oregon Department of Energy (State of Oregon).

Ken was absent and asked that Dirk Dunning, Oregon Department of Energy (State of Oregon), read a written statement. Dirk provided the statement to EnviroIssues:

“Ken Niles asked me to read this statement on behalf of Oregon. We continue to analyze DOE's proposed Central Plateau cleanup completion strategy. We have a number of questions and many concerns. Our biggest concern at this point is how much cleanup would occur within the new Inner Area under this plan. We have long recognized that with the Environmental Restoration and Disposal Facility (ERDF) and the Integrated Disposal Facility and the canyons that there will be some areas that would have caps and waste would remain under them forever. But we have always maintained that these areas where waste will remain should be as few and as small as possible. In September 2004, Fluor Hanford published a draft plan for the Central Plateau closure. It shockingly called for capping 1,700 acres of waste sites - a huge part of the Central Plateau. That was absolutely unacceptable. Unfortunately, the more we delve into the current proposed Central Plateau cleanup strategy, the more it resembles that Fluor document from five years ago. The current document pre-supposes that every tank farm, all the old waste trenches, and many other areas within the Central Plateau will be capped after some rudimentary level of cleanup, if any. The new strategy, in fact, does actually say that the Inner Area will be entirely designated as a waste management area where, "waste and residual contamination will remain in place." This seems to suggest that there will be little or no waste site cleanup within the Inner Area. New worker exposure scenarios proposed in this plan would allow significantly increased levels of waste to remain because the assumptions would be that any human exposure would be brief. This would raise the risk to workers and cause waste sites that would have been cleaned up under the old scenarios to be left in place. We have long been concerned with DOE's use of the Comprehensive Land Use Plan (CLUP) and other methods to use a future anticipated use of the land to adjust the level of cleanup within that area. Instead, the goal of the cleanup that we envision should be to conduct the highest level of cleanup possible, and then once the cleanup is completed, if some constraints or restrictions are necessary, then they should be put into place. We believe that cleanup laws support our vision as well.”

Gene Van Liew, Richland Rod and Gun Club (Local Environmental)

Gene said the cleanup strategy presentation was a great way for the public and organizations to understand the proposal and to identify their concerns and questions in specific areas. He said DOE should try to meet the proposed dates [in the strategy].

Julie Jones, City of West Richland (Local Government)

Julie said as a public official, she was mainly concerned about public safety and public information. She thought the Adobe Flash presentation about the cleanup strategy [shown at lunch] was a good way to describe the plan to the public. She said the groundwater work is good for ensuring public safety and would like more money to go to groundwater cleanup. She said her constituents are consistently concerned about the Hanford budget and they want to continue funding into the future. Julie also said her constituents firmly believe that caps should be used as little as possible.

Steve Hudson, Hanford Watch of Oregon (Regional Environmental/Citizen)

Steve said the strategy looks to be a broad-based approach to cleanup. He thought it was complex but still accessible to the reader. Steve said it is important to look at overarching questions; the public should be able to see the whole picture, not just pieces. Therefore, it is better to have fewer RODs rather than more since such preserves a more accurate view of the whole

Mike Korenko, Public-at-Large

Mike thought DOE made a good effort to get its hands around a complex topic. He said it is the first step the Board has seen toward capstone engineering, a process designed to avoid getting caught in the weeds. He liked the idea of fewer operable units, but thought there should be more than four records of decision (RODs). He said the concept of inner and outer areas seemed like the right demarcation, but the vadose zone needs more attention. It could be the third area – the Inner Area, Outer Area, and Vadose Zone. Mike thought there will be technologies in the future to deal with the vadose zone and DOE should use a risk-based approach for the vadose zone. Mike also noted that the safest alternative for technetium-99 is to extract and isolate it; do not dilute it.

Gerry Dagle, Benton-Franklin Public Health (Local/Regional Public Health)

Gerry said from a public health standpoint, Benton-Franklin Public Health is pleased with the effort to continue to make the Hanford Site and surrounding areas healthier places to live. He reminded DOE that it has continued responsibilities to retired workers and they should consider that responsibility in the strategy.

Dick Smith, City of Kennewick (Local Government)

Dick said he generally supported the strategy, and that Hanford has needed an overall site strategy for a long time. Dick said DOE should focus on removing as much of the shallow vadose zone as early as possible so contamination does not reach groundwater. Dick said this would help reduce the amount of contamination showing up in groundwater 2,000 and 3,000 years down the road. He said he supported the idea of flushing after the near-surface is removed, and seeing how pump and treat systems respond.

Sam Dechter, Public-at-Large

Sam applauded the strategy and thought it was a good path forward. He wanted to know more about the “what ifs.” He said DOE cannot predict the best technologies in 50 or 100 years, or what will be the cheapest, or the endurance of the federal budget. He wanted to see the strategy build in decision points and alternative options.

Barry Beyeler, Oregon Hanford Cleanup Board (State of Oregon)

Barry said the Hanford Cleanup Board is very hesitant about capping and institutional controls; it would be very difficult to gain that group’s support for those strategies. Barry said land use plans (e.g. CLUP) change over time – much faster than any half-life. He said exposure scenarios should be carefully evaluated.

Ken Gasper, Benton County (Local Government)

Ken applauded the strategy and supported Dirk and Mike Korenko’s comments, especially as they relate to technology. He agreed with the groundwater plan and applying River Corridor cleanup standards to the Outer Area. He had reservations about the Inner Area and preferred to have a west and an east Inner Area, with a designated industrial corridor. He did not want the Inner Area to become a sacrificial zone, and thought the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) standards could be applied under normal risk-based scenarios. He thought that will help DOE maximize the acceptability of the Inner Area.

Floyd Hodges, Citizens for a Clean Eastern Washington (Regional Environmental/Citizen)

Floyd said having a strategy is better than not having one, since it allows one to see where the data gaps are. However, he thought it was a short range approach to a long-term problem. Floyd said every tank at Hanford has or will affect groundwater. The vadose zone will continue to feed the groundwater. Floyd said pump and treat is good as long as there is not a continuous source [vadose zone] feeding contamination into the groundwater. Floyd said the Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) contains scenarios using pump and treat systems for 2,000 years; any serious attempt to take care of groundwater contamination in the long-term has to remove vadose contamination as soon as possible. Floyd said a cap could work for 100 years, but not for the half-life of technetium, for example. He said nobody can predict what will happen at Hanford over the next thousand years. He said the only way to achieve long-term protection is to remove contamination.

Gerry Pollet, Heart of America NW (Regional Environmental/Citizen)

Gerry said he agreed with Floyd's and the State of Oregon's comments. He said it is backwards to adopt a strategy before completing an EIS. The TC&WM EIS is supposed to identify risk. Gerry said there will be thousands of years of increasing contamination to groundwater if waste is left in place. He said the Central Plateau strategy is a retreat from the vision of decreasing the footprint of the waste management area because it leaves the entire Inner Area as a waste management zone. Gerry also commented that the law requires developing appropriate exposure scenarios. He said the occasional intruder scenario is not a reasonable maximum exposure scenario. He said at minimum, DOE could use is an industrial area cleanup standard and a worker scenario of 200 hours per year.

Larry Lockrem, Non-Union, Non-Management Employees (Hanford Work Force)

Larry thanked DOE for the cleanup strategy workshop and said the Adobe Flash tool was excellent. He added that it should show if the road cuts through the Inner or Outer Area. He said it was unclear where and how wide the buffer zone is between the Inner and Outer Areas. Larry asked for more information about the buffer zone and permitting a power plant in that zone, for example.

Susan Leckband, Non-Union, Non-Management Employees (Hanford Work Force)

Susan said she liked the idea of the strategy. She asked how it will match up with the 200 Area White Paper that was issued by EPA and Ecology. Her main concern was the limitation of the number of RODs. Four RODs does not seem to be enough. Susan added that grouping large numbers of cleanup decisions together is hard for the public to understand, and she thought it also forced the agencies into making some decisions earlier than necessary. She thought characterization is a big issue, as well as capping versus remove, treat and dispose. She recommended that the agencies review the flowcharts the Board developed for the Central Plateau and groundwater. The flowcharts reflect Board values: Remove, treat and dispose is always the Board's preference.

Liz Mattson, Hanford Challenge (Hanford Work Force)

Liz said she was concerned about the strategy. She thought it is easy for people to forget there is not a lot known about the Outer Area (the "sea of blue"). She said even though there are commitments to continue monitoring, she did not trust that the agencies know enough to shrink the site at the pace that is proposed. She thought it seemed rushed and did not want to use a short-term approach to a long-term problem. Liz said she would like to hear more details about long-term monitoring and would like to see more maps showing burial grounds and areas that will not be included in final cleanup actions.

Pam Larson, City of Richland (Local Government)

Pam liked the concept of having a strategy but did not think DOE should artificially limit the number of RODs. She said pre-1970s and remote-handled transuranic waste (TRU) should be removed from the site. She supported the Inner and Outer Area concept and was glad to see 100 Area standards applied to the Outer Area. Pam said she was concerned about capping near the canyons, and wanted to be sure source terms are not capped if it will create problems in the future. She did not like the concept of land ownership remaining with DOE; they should look at the possibility of transferring land ownership. She thought that may result in a more robust cleanup [if the land is not owned by DOE]. Pam said she was concerned about technetium-99 and leachates. She noted that she looks forward to seeing the PW 1, 3 and 6 plan.

Maynard Plahuta, Benton County (Local Government)

Maynard said he has difficulty with some assumptions in the strategy. He said the agencies should apply the outcomes of the base assumption workshop to the strategy. Maynard said there should be more than four RODs; a ROD is needed for the vadose zone. He also noted that rather than waiting for new technologies to be developed specifically for cleanup, DOE should look to other industries that have technologies that could be applied at Hanford, such as the mining or oil industry. He believed there are existing technologies that could be used. He encouraged DOE to invest in developing technologies for the vadose zone. Maynard also noted that he has concerns about pre-1970 TRU waste and the need to characterize it.

Dirk Dunning, Oregon Department of Energy (State of Oregon)

Dirk thought DOE should be cautious about metrics. He said geographical areas are not the best way to measure hazards. He thought they should measure in terms of hazard, for the short and long-term. Dirk

cautioned that that the agencies should be careful about defining how long institutional controls can be maintained, especially since no nation has lasted longer than 1,000 years with the same kind of government. He said they cannot remain in control forever.

Round 2

The Board decided to allow a second round for comments. The opportunity was equitably applied, so all Board members and their alternates were given the chance to provide additional comments (two minutes each).

Emmett Moore

Emmett said DOE should consider what Dick said about the vadose zone.

Keith Smith

Keith said capping is not the same as creating a regulated disposal site (e.g. the Environmental Restoration and Disposal Facility).

Ken Niles (absent, statement read by Dirk Dunning)

Dirk read from a written statement that was provided to EnviroIssues:

“This plan seems to indicate that very little additional characterization will be conducted. One of the most basic principles from the position paper on capping waste sites that was developed by the Oregon Hanford Cleanup Board in 2005 is that you cannot leave waste in place if you don't even understand what's there. You can't make good decisions without good information and before anyone assumes that the waste disposal trenches and leaked waste under the tanks can simply be left under caps, we need to know what's there so we can understand the risk and the future behavior of the waste.”

Mike Korenko

Mike said the more he thinks about the vadose zone, the more he thinks it should be the fourth “Area.” He also commented that just because DOE did not invent a particular technology, does not mean that technology does not exist. He asked DOE to look at technologies used in other industries.

Dick Smith

Dick said rather than spending immense amounts of money characterizing a pre-1970s TRU waste trench, DOE should just take out what waste it can and dispose of it. He said in certain instances, characterization is unnecessary and needlessly expensive.

Barry Beyeler

Barry said Dick is right. DOE should aggressively pursue remove, treat and dispose instead of capping.

Maynard Plahuta

Maynard said DOE should not wait to clean up the vadose zone. He said DOE should look at existing industry activities and technologies.

Floyd Hodges

Floyd said the vadose zone is poorly understood and complex. He cited an example of the discovery of a silt layer running through the vadose zone that carried contamination from PUREX outside the site fence. He reinforced that DOE does not know what it is in the vadose zone.

Larry Lockrem

Larry clarified that he wanted to know if there was a buffer zone; if there is, what is the difference between it and the Inner and Outer Areas? Larry said he will follow up with EPA.

Liz Mattson

Liz commented that she was glad the Board did a second round of the Sounding Board. She said being new to the Board, she thought it was in the Board's best interest to continue a conversation when it is exciting and interesting. She thought there should be more flexibility in the agenda when there is vigorous interest in a subject.

Next steps

Pam said although the strategy provides a plan for making decisions, it is not a decision document. RAP will discuss what it thinks should happen next and consider developing advice. She asked Board members to provide RAP with input about next steps.

Briant Charbonneau said he found the Sounding Board very useful.

Public comment

No public comment was provided.

Board business

Schedule

Committee calls:

- PIC: November 12, 11:00 am
- EIC: November 12, 2:00 pm

Committee meetings:

- RAP: November 17, all day
- BCC/TWC: November 18
- TWC/HSEP: November 18, afternoon

February meeting topics:

- NRC waste classification requirements
- Evening sessions (PIC)
- Committee leadership nominations (new leadership to attend the retreat in April)
- Potential advice
 - TC&WM EIS
 - TPA change package (potentially related to the Central Plateau cleanup completion strategy)
 - CRP advice
 - Single-shell tank integrity report
- Long-term stewardship
- System plan revision 4, review report
- MSA contractor introduction and overview

Paige thought the Board should limit the February Board agenda to ensure there is enough time to fully discuss and develop good advice about the TC&WM EIS.

Steve said DOE will ask the single-shell tank integrity panel to review some items in the draft report, so it might not be ready for the February Board meeting.

COTW schedule

At the last Board meeting, the Board approved a schedule for COTW meeting placeholders for months without Board meetings. Susan Hayman said a number of those will be used, including one for the TC&WM EIS and base assumptions. She recommended that the Board pick a date for those COTW meetings today, especially for the TC&WM EIS.

Pam did not think the Board was ready to pick a date for the TC&WM EIS. Susan thought the Board should not defer selecting a date, given that previous COTW meetings were put together at the last minute.

Rob thought they were going to hire the technical expert before setting a date for the TC&WM EIS COTW meeting date. Susan Hayman said they decided to have a general COTW meeting followed by a technical issue managers meeting. Dirk said they should have the COTW meeting early in the comment period.

Susan Leckband said EIC will discuss it on their conference call. Gerry commented that the last COTW meeting was set with little time to prepare. He thought the COTW meeting should be held earlier so Board members can then do a technical

The Board decided to defer selecting a date for the TC&WM EIS COTW meeting. It will be an EIC conference call topic.

Process for developing advice from a COTW meeting

The Board reviewed a draft proposal for developing advice from a COTW meeting. The Board was not asked to finalize the process today.

Dirk thought an issue manager should be selected before or early in the meeting to guide the topic and advice through. He said it should work similar to other committee processes, and that regular committees should be kept as the lead (not EIC).

Keith suggested including the process, once finalized, in new member orientation.

EIC will review the draft proposal.

Board evaluation

The Board will receive links to an online survey tool to conduct the annual Board self-evaluation. Printed copies are available upon request. Results will be presented at the February Board meeting.

Annual report

EnviroIssues is drafting the 2009 HAB Annual Report. Susan Hayman asked Board members and agency representatives to send photos of site tours, Board activities, and general site work to her or Cathy.

Attendees

HAB MEMBERS AND ALTERNATES

Barry Beyeler, Member	Maynard Plahuta, Member	Larry Lockrem, Alternate
Tom Carpenter, Member	Gerald Pollet, Member	Gwen Luper, Alternate
Rob Davis, Member	Keith Smith, Member	John Martell, Alternate
Earl Fordham, Member	Bob Suyama, Member	Liz Mattson, Alternate
Norma Jean Germond, Member	Gene Van Liew, Member	Emmett Moore, Alternate
Harold Heacock, Member		Nancy Murray, Alternate
Becky Holland, Member	Al Boldt, Alternate	Vince Panesko, Alternate
Julie Jones, Member	Gerry Dagle, Alternate	Wade Rigsbee, Alternate
Mike Keizer, Member	Sam Dechter, Alternate	Dave Rowland, Alternate
Paige Knight, Member	Dirk Dunning, Alternate	Dick Smith, Alternate
Pam Larsen, Member	Ken Gasper, Alternate	John Stanfill, Alternate
Susan Leckband, Member	Laura Hanses, Alternate	Art Tackett, Alternate
Jeff Luke, Member	Floyd Hodges, Alternate	Steve White, Alternate
Doug Mercer, Member	Steve Hudson, Alternate	
Bob Parks, Member	Mike Korenko, Alternate	

AGENCY, CONTRACTOR, AND SUPPORT STAFF

	Suzanne Dahl, Ecology	Sonya Johnson, CHPRC
Paula Call, DOE-RL	Jane Hedges, Ecology	Dale McKenney, CHPRC
Briant Charboneau, DOE-RL	John Price, Ecology	Barb Wise, CHPRC
Matt McCormick, DOE-RL	Jeff Lyon, Ecology	
Marco Udoh, DOE	Ron Skinnarland, Ecology	Sharon Braswell, MSA
		Dru Butler, MSA
	Craig Cameron, EPA	Terry Noland, MSA
	Dennis Faulk, EPA	
	Emy Laija, EPA	Tammie Gilley, EnviroIssues
Mary Beth Burandt, DOE-ORP	Robin Paul, EPA	Susan Hayman, EnviroIssues
Lori Gamache, DOE-ORP		Hillary Johnson, EnviroIssues
Steve Pfaff, DOE-ORP		Cathy McCague, EnviroIssues
Woody Russell, DOE-ORP	Mike Priddy, WDOH	
	Glen Florent, Navorro (?)	

MEMBERS OF THE PUBLIC

Matt Johnson, CTUIR	Annette Cary, Tri-City Herald (phone)	
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