

**FINAL MEETING SUMMARY**

**HANFORD ADVISORY BOARD  
RIVER AND PLATEAU COMMITTEE MEETING  
October 9, 2009  
Richland, WA**

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*This is only a summary of issues and actions in this meeting. It may not represent the fullness of ideas discussed or opinions given, and should not be used as a substitute for actual public involvement or public comment on any particular topic unless specifically identified as such.*

**Welcome, Introductions and Announcements**

Pam Larsen, River and Plateau Committee (RAP) Chair, welcomed the committee, introductions were made, and the committee adopted the August and September meeting summaries.

**Announcements:**

100 BC Area:

John Neath, Department of Energy – Richland Operations Office (DOE-RL), provided an update on the remedial river investigation for the 100 BC Area. He said DOE-RL received the first trident probe samples, which had higher hexavalent chromium concentrations than expected. John said 14 of the samples exceeded the Environmental Protection Agency (EPA) water-quality criteria of 10 parts per billion. He said the trident probe collects samples 12 feet below the mud line, and sample data for other areas will be collected over the next three months to help determine the risks to aquatic life. John said four groundwater wells are currently being installed in the BC Area and six additional wells are proposed as part of the 100 BC Area Remedial Investigation (RI) work plan. He said additional steps will be evaluated as new data comes in and DOE is committed to meeting water quality standards to protect the Columbia River.

### Regulator Perspectives

- Laura Buelow, EPA, said there is not an interim record of decision (ROD) for BC groundwater, but it is currently exceeding ambient water-quality criteria. She said a borehole at one waste site found hexavalent chromium in the groundwater at 85 feet. Comments on the BC work plan are due by the end of November, and Laura said EPA is proposing a half-day technical workshop on upwelling data, the proposed wells, and to discuss treatability tests. The committee expressed interest in this workshop.

### Committee Discussion

- Maynard Plahuta asked if any materials other than chrome were identified. Laura said the study initially looked at hexavalent chromium as an indicator to narrow down the study areas. She said in the next phase of testing the number of sites will be narrowed but will test for a larger suite of contaminants.
- Wade Riggsbee asked whether there were any radiologic materials detected. Laura said none were initially detected but the next phase of testing will look for that. John said some other sites are looking at strontium as an indicator. Jeff Lerch, Washington Closure Hanford (WCH), said DOE first used the test probe to collect conductivity data, then tested for hexavalent chromium, and plans to expand testing to a larger suite of contaminants. Wade commented that he thinks the results are helpful because of the need to expand the suite of contaminants.
- The committee planned to discuss the potential for a technical workshop during the Committee Business portion of the meeting. Laura said EPA would like to do the workshop at the beginning of November. She said it also needs to be scheduled and coordinated with the Natural Resource Trustee Council (NRTC). Paula Call, DOE-RL, added that hard copies of the study are out for regulator review, and regulator comments are due to DOE at the end of November. The next document for public review will not be until the proposed plan is released.
- Pam asked how it was determined to be Hanford chromium. Laura said it is Hanford chromium because it is hexavalent chromium.

### M-91 Milestones:

Paula announced that DOE and the Washington State Department of Ecology (Ecology) have had a negotiation team on the M-91 milestones, which are part of the tentative agreement and change package that was signed a couple of months ago with tentative dates. She said the agencies would like to provide a briefing in November on what will be in the change packages released for public comment in December or before the beginning of the year. She said if the RAP does not want a briefing they will still receive a draft change package as part of the public comment period. M-91 relates to waste retrieval and treatment.

### RadWaste Summit:

Shelley Cimon provided an update on the RadWaste Summit she recently attended in Las Vegas. She said Patty Lubar, a member of the U.S. Nuclear Regulatory Commission (NRC), made a proposal to change the NRC regulation concerning waste classification and requirements (Part 61 – Waste Classification Rule). Shelley said she also talked about their branch positions and that materials such as uranium would be classified as unique because its hazards increase over time. She said there are also issues of disposal configurations, receptor scenarios, and state regulations coupled with federal regulations, and there needs to be agreement on how waste needs to be handled. Patty also discussed the issue of blending, which has been handled on a case-by-case basis, and she said she would like to see that addressed in the guidance. Shelley said the issue of blending will have ramifications for Hanford waste, importing waste and how waste is disposed of in the future. Shelley said the RAP needs to discuss these issues. Shelley said elements of this that may impact Hanford cleanup are disposition, classification, having to package waste differently, and risk-bounding over time. Maynard asked whether Patty was speaking for the NRC at the summit. Shelley said she was speaking for the NRC. She said this is a long process but the dialogue has started and the HAB should be involved. Shelley and Susan Leckband proposed at the Site-specific Advisory Board (SSAB) meeting that DOE – Office of Environmental Management (DOE-EM) bring this issue before the NRC chairs this spring. Pam commented that the Tank Waste Committee (TWC) is interested in what NRC is doing to the Waste Treatment Plant (WTP).

### **Hanford Framework**

#### ***Shared session with Public Involvement and Communication Committee (PIC)***

Steve Hudson reviewed the Hanford Framework document. He said Ken Niles provided focused comments on content and organization as well as clarity of audience. Steve said Ken commented that the document is comprehensive but it is not clear who the audience is, and at times seems like a public document while other sections are technical and average readers may not be familiar with the terminology. Steve said a document for the general public needs an intuitive format and that is not always the case in the Hanford Framework. He said there are a number of sidebars that provide useful information, but the type of information included is not consistent, which makes it difficult to predict what the box will include. He said the document is very long and at times redundant, and could be condensed. Steve said there are also suggestions about editing, grammar and clarity that he could provide.

Doug Mercer said he agrees with Ken and Steve's comments. He said the audience for the document and how it relates to other documents is unclear. Doug said it was a useful document for him to get a clear view of the whole cleanup but it also seemed like a DOE document. He said another issue is that there is little acknowledgement of the technical uncertainties at Hanford, which will make readers question the document. He said the document lacks acknowledgement of ambiguities in land use and political funding uncertainties and does not mention the tribes. Doug said the document was helpful in many ways but could be improved in these areas. He said the document can be used to communicate but cannot be an entry-level document. Involved stakeholders could

respond to the Hanford Framework, but the general public would need a coherent set of entry-level documents. Doug said the Hanford Framework should be a second or third-tier document that could be used to bring people from a general understanding to a more coherent understanding. He said if DOE wants effective feedback on Environmental Impact Statements (EISs) and RODs this document could be used in a tiered way to help prepare the public to provide coherent responses and advice. Doug said he does not see a need to issue advice on the Hanford Framework, but there may be an opportunity to provide advice on preparing the public to comment on decision documents. He suggested that DOE could gather a focus group on how to arrange and craft a series of tiered documents that prepare the public to provide coherent advice on other documents. Steve said the summary that begins the document could be a first-tier description that includes key issues. Doug suggested the Hanford Framework could be the third tier of an online, wiki-style document that has introductory level information with links to an increasing depth of information.

Pam asked Dale Engstrom, Oregon Department of Energy (ODOE), to summarize the comments ODOE submitted to the DOE on the Hanford Framework. ODOE said the document is well written and was needed in order to put the framework of how Hanford cleanup is being approached in a readable format. ODOE commented that the executive summary states that it is not a decision document, but goes on to discuss decisions that have been made or are going to be made, such as caps, and the danger is that this can become a self-fulfilling legacy by pre-supposing a decision that has not been made. Dale said the HAB and RAP have been careful about advice about caps and the danger of using them inappropriately, but the Hanford Framework does not address this. ODOE also commented that the document talks about spraying weeds even though there are problems controlling those that have become herbicide resistant. The language is also changing – rather than saying groundwater will be restored to its highest beneficial use it now says highest intended use, which relates to industrial-zoned land and the issue of using the Comprehensive Land Use Plan (CLUP) to make this decision. Dale said this is a concern that has been repeated and the RAP has asked for a workshop to review the base assumptions used to make these decisions.

Dale reviewed the first sentence on page 32 of the Hanford Framework, which says DOE expects that groundwater plumes will be contained in the Central Plateau (CP), but they are not currently contained. The next statement says that there is material within the vadose zone that has been modeled as being stationary, but there is evidence that it is mobile and there has not been an attempt to deal with the vadose zone, especially the deep vadose zone. ODOE said Section 4 fails to mention cesium and strontium stored at Hanford, which represents one of the largest curies of waste. The Hanford Framework also says single-shell tanks (SSTs) will store waste past their intended life but nearly all SSTs are already past that point. ODOE suggested this could be reworded to say that SSTs are required to store waste beyond their original life. DOE predicted that tank waste will be retrieved by 2015, but the new milestones require this by 2014. ODOE said section 5-4 on tank farm closure is thin, and would like to see more alternatives in the closure scenario, specifically clean closure and a more comprehensive discussion of issues and alternatives of tank waste that has already leaked into the ground. ODOE said

DOE does not appear to fully appreciate liability when it chooses to leave waste in place rather than remove, treat and dispose (RTD). ODOE said this is reflected in planning documents for engineering and cost, which do not analyze the cost of leaving waste in place through the use of institutional controls (ICs), the CERCLA five-year review, possible future remediation actions, and ongoing natural resource liabilities. Dale said the RAP has discussed these issues and the HAB has issued advice on them, but they keep coming up. ODOE said the stated purpose of the Hanford Framework is to guide people making decisions toward remediation and cleanup, but it repeats issues like capping and ICs and does not address issues with the vadose zone.

### **Regulator Perspectives**

- Matt McCormick, DOE-RL, said the committee's input is helpful. He said the purpose of the document is to provide context to reviewers looking at a decision document so they can understand how a particular action or decision document relates to the overall cleanup of the Hanford site. He said the document needs to be in a format that is understandable and the regulators received insight on how to do this better in the next revision. Matt said it is a good idea to consider how to put the document on the Web site and he likes the idea of the tiered approach Doug mentioned. He said the other use for the document is making it required reading for all Hanford employees, especially new employees, so they have an understanding of the scope of cleanup and how all of the cleanup activities tie together.
- Dennis Faulk, EPA, said he thinks the Hanford Framework is a useful document and will be helpful for new employees to gain a broad understanding of the Hanford cleanup. He said he applauds DOE for developing this document. Prior to the Hanford Framework, the only reference document the agencies had was the Community Relations Plan's (CRP) five-page summary, which did not include the needed level of information. Dennis said EPA gave DOE comments on the initial draft and DOE addressed many of these concerns. He said one issue is how DOE uses its land-use plan. Dennis said one problem the agencies always have with Hanford documents is that the audience is broad and diverse, and he thinks they need to choose a primary goal and audience and hope it works for everyone else.
- John Price, Ecology, said for years it has been frustrating because the agencies worked with the public on individual projects but did not have a way to communicate how these projects fit into the whole cleanup. Ecology did not review the initial Hanford Framework and provide comments. John said Ecology will likely borrow from the document in the future when individual RODs are completed because there is a section that explains how the individual decisions fit into the overall cleanup. He said the HAB should issue advice if they do not think it is clear because it is an area Ecology will use in the future.
- Matt said what is reflected in the document came from DOE's groundwater strategy and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulations that say groundwater should be restored to its beneficial use, not intended use. He said it its beneficial use relates to restoration, which is usually to drinking-water standards but is sometimes lower if it is aquatic use or if it is going

into the river. Matt said this does not reduce the CERCLA requirement and DOE does not use intended use because that implies that it will not be cleaned up. Maynard commented that this may be the intent of the wording but the document gives the perception that groundwater will be restored to its intended use, and this needs to be clarified.

### *Committee Discussion*

- Sandra Lilligren said the purpose of the document is not clear and suggested that a description of the purpose of the Hanford Framework be included at the beginning of the document.
- Pam said she agrees with ODOE's points, and added that there is an assumption that DOE will maintain ownership of the entire Hanford site and this is guiding decisions, especially regarding long-term stewardship (LTS). She said a September 15 memorandum from Inés Triay, DOE-EM, designated tracts of land that will be transferred to a third party for rapid deployment of energy facilities. She said the community is interested in land becoming available for an energy park, specifically the land south of Energy Northwest that is designated industrial, so the presumption that no land will be released is incorrect.
- Pam said the diagram on page 24 was confusing and would not benefit readers' understanding of the process. Matt said this diagram was meant to show a graphic depiction of the process of the remedial investigation/feasibility study (RI/FS) leading to RODs since there are interim RODs under CERCLA for the six decision units along the river, the five reactor areas and the 300 Area. He said it was an attempt to show how all of these areas are brought together. Pam suggested adding text to the page that describes this process.
- Gerry Pollet said the Hanford Framework resembles the risk-based end states document. He said if the Hanford Framework is meant to serve the purpose it states, then DOE should have come to the Board, other audiences and the regulators to ask what document format would serve this purpose before it was written. He said if managers were to rely on this document on issues like caps and tank closure they would miss every element of the controversy from the regulatory agencies, the HAB and the public. Gerry said there was an opportunity to come to the agencies, HAB and the public first and the document should include a description of DOE's vision on capping as well as the Board's guidance and a discussion of other controversial points of view on capping. He said there is not discussion of Model Toxic Control Act (MTCA) or Resource Conservation and Recovery Act (RCRA) requirements on capping or tank farm cleanup. Gerry said it would serve a valid public purpose to include the range of views on each major decision. He said on many items the Hanford Framework does not include a commitment to clean up based on risk-based standards under MTCA, which relates to the failure to include treaty rights. He said the document illustrates the gap between the public vision of cleanup and DOE's vision.

- Gerry asked the purpose of commenting on the Hanford Framework and whether a discussion of public comments will be included in a revision of the document. Paula said there was a plan to do a comment-response document. Gerry asked where this would go. He said if the document is going to serve a useful purpose it needs to describe the multiplicity of views on how those decisions should be made, and including the comment responses with the document is the only way to make it useful.
- Susan said she saw the RAP's review as a first, informal review. She said she thinks Doug's idea of using a tiered level makes sense and she would like to use high-level excerpts from the document for a HAB 101 presentation. She said she likes the Hanford Framework and was intimately involved with risk-based end states. Susan said she thinks it is a good start.
- Doug said it is clear that there are audience issues with the document and all the RAP's other comments could be classified under technical, policy and cost uncertainties. He said he disagrees that it is a waste of time, but if it is going to be for an internal or external audience then DOE needs a clear statement of the uncertainties, with the issue of ownership as the main policy uncertainty. Doug said the Hanford Framework should be re-conceptualized as a clear, Web-based document and suggested the RAP go back to the PIC and have the PIC determine a strategy on how the Board should comment. He said he does not think the HAB should issue advice on this document alone.
- Doug asked who wrote the Hanford Framework. Matt said he wrote a great deal of the document and Stacy Charboneau, Department of Energy – Office of River Protection (DOE-ORP), wrote part of it.
- Pam commented that she liked the regulatory piece of the document.
- Maynard said ODOE commented that full accounting of all lifecycle costs in DOE's decision process is needed. He said this element should be emphasized.
- Dick Smith said the Hanford Framework in its general format would be useful for people who have to create lifecycle cost and schedule documents. He said the document lays out what needs to be accomplished. Dick said this document does not need to include how all of the cleanup will be accomplished, and this information could be in an appendix or included as a link. The overall picture of looking at what needs to be done did not exist, and Dick said the Hanford Framework provides a useful, high-level look at this.
- Pam said many of the questions Dale posed are in the CP Strategy. Pam said the HAB cannot issue advice on the Hanford Framework because there are many differing opinions, and suggested input be provided through a roundtable discussion or individual written comments.
- Gerry said he does not see a commitment to present the HAB's viewpoint on how these decisions should be made unless there is agreement that the HAB and regulators' viewpoints should be presented. Pam said the RAP can recommend that there be a way to find out HAB advice through this document as oral advice.

### Hanford Framework - Concerns (as captured on flip chart notes by Susan H.)

1. Audience? Sometimes pretty technical for lay reader.
2. Some organizational inconsistencies that make reading challenging.
3. Long...overly so. Could be shortened by reducing redundancy.
4. Purpose issue – how does this relate to other documents?
5. Doesn't reveal technical uncertainties
6. Doesn't acknowledge land use and funding uncertainties.
7. Lack of any mention of the tribes.
8. Public application – Can't be entry-level document due to technical nature. 2<sup>nd</sup> or 3<sup>rd</sup> level tiered document, to help prepare the public to comment on RODs and other decision documents.
9. Feels like in “presupposes” caps, which HAB has advised against.
10. “Beneficial” “intended” uses – assumptions show up in document (use of CLUP).
11. Document refers to use of ICs in a way that presupposes application beyond what HAB has been comfortable.
12. Reference to containment of GW plumes...seems premature.
13. Vadose zone approach descriptions.
14. No reference to cesium or strontium.
15. SST reference – Should acknowledge that they are storing waster beyond identified capability.
16. List of references to specific cleanup – concerns with assumptions of what will be done.
17. Assumption that DOE will maintain ownership forever, with implications to LTS/ICs. Feels like the wrong assumption.
18. Figure 3-2 is confusing, even to more technically familiar people. Needs more context/text to clarify.
19. Doesn't reference or describe points of controversy in cleanup approach (capping, etc.).
20. Doesn't discuss multiplicity of views in cleanup, etc.
21. Technical, policy and cost uncertainties need to be disclosed.
22. Include HAB and regulator perspective in document.

### **Central Plateau Strategy Update**

Pam introduced the CP Strategy document. She said the RAP issue managers (IMs) recently met about the CP Strategy, which is an ongoing process. Pam said this process has been very involved, with 24 meetings and three Tri-Party summits.

Matt said the CP Completion Strategy tiers off of the Hanford Framework and provides more detail about the overall vision for the CP and the inner area of the CP where long-term waste management activities will take place. Matt said DOE has heard a great deal of support for the outer area cleanup, which includes remediation of waste sites and tearing down excess facilities by 2015. The groundwater strategy has not changed, and

Matt said DOE is still focused on containing the plumes and remediating those plumes to meet drinking-water standards.

Matt said recent discussions have focused on how DOE will make decisions in the inner area, focusing on the CERCLA and RCRA processes outlined in the Tri-Party Agreement (TPA) and the Tank Closure and Waste Management EIS (TC&WM EIS) that are outside of CERCLA and RCRA processes but still key components of inner area cleanup. Matt said DOE is excited about the strategy and thinks it is timely to provide the CP strategy. The river corridor cleanup will be completed in the next two to four years, and an understanding of CP cleanup in the 2013-2014 timeframe is needed. Matt said DOE hopes to take advantage of funding that will become available as the river corridor work is completed and would like to be able to continue the same level of work on the CP by having the strategy, regulatory framework and decisions completed. The CP Completion Strategy is meant to provide the vision and process for this cleanup for the inner area, outer area and groundwater. Matt said DOE will be talking to the tribes separately and plans to conduct ongoing discussions with the HAB and other groups. He said the Board has issued recent advice on key issues like characterization and defining the reasonably maximum exposed individual. Matt said he hopes to continue a dialogue with the HAB.

Briant Charboneau, DOE-RL, provided an overview of the CP Strategy. He said the 2015 Vision is focused on shrinking the footprint of the site, and the CP Strategy is the next phase of that vision. Based on the American Reinvestment and Recovery Act (ARRA) funding forecast for the next couple of years, Briant said DOE hopes to complete the river corridor and outer area by 2015. This leaves the inner area, which is the primary focus of the CP Strategy. Briant said the three components of the CP Strategy are shrinking the 75-square-mile footprint to approximately 10 square miles (the 'Inner Area'), completing a cleanup comparable to the river corridor in the outer area, and remediating the largest plume at Hanford.

Briant said the CLUP includes a description of a DOE-sponsored industrial exclusive area of 20 square miles, and the CP Strategy proposes shrinking that 20 square miles to approximately 10 square miles to comprise the Inner Area. He said the Inner Area is defined by multiple permanent decisions that have already been made, including the Environmental Restoration Disposal Facility (ERDF), U.S. Ecology, U-Canyon Plant, the mixed-waste burial trench and other decisions regarding permanent disposal. Another boundary of 10 square miles is the deep vadose zone contamination, which Briant said cannot be remediated with current technology. The U-Canyon decision states that there will be a remnant footprint, and DOE assumes that other canyon buildings and the tank farms will also cause a footprint. Briant said the items that cannot readily be solved today help define the Inner Area. For the Outer Area, DOE will create cleanup comparable to the river corridor. Regarding the groundwater, Briant said DOE made a landmark decision to clean up the largest plume at Hanford and has incorporated MTCA requirements into federal regulations, which require cleanup levels more stringent than federal drinking water standards. He said the facility is in preparation and wells are currently being constructed.

Briant said DOE thinks it has prepared a good document and he thinks the CP Completion Strategy is the most important document DOE has written in the last five years, possibly since the TPA. He said DOE believes that some actions are logical details of what is being discussed, but DOE has written them down and needs feedback on whether it can negotiate these details to release the TPA Change Package at the beginning of 2010. He said there will be many interactions with the HAB between now and next spring, but DOE would like feedback on the high-level concepts of the strategy.

Briant provided an overview of why a different strategy is needed in the CP. He said the CP was originally divided into geographic operable units (OUs). He said DOE made the decision to take this process knowledge and re-map the OUs. PW-1, 3, and 6 are waste streams that contain carbon tetrachloride and plutonium. Briant said these are scattered throughout the CP but have similar content. Most of the characterization on these units has been completed. Briant said when the Tri-Parties discussed implementing decisions there is fairly good agreement that cleanup should be implemented on a geographic basis. There are six adjoining trenches behind the Plutonium Uranium Extraction Plant (PUREX), and he said it is not practical to have six contractors working separately on these trenches. He said when looking at alternatives it would be helpful to know the decisions for each unit, especially in situations with a large footprint like a canyon building where some of it will be demolished and there will be a remaining residual with a cap over it. If the only threat is ecological exposure, he said knowing there would be a cap over an area to provide effective isolation is important. DOE believes the most efficient, practical approach is to take a large area in its totality and use a consistent methodology and risk-assessment approach to consider a wide range of alternatives. Briant said one main part of the CP Strategy is a wide range of alternatives, with the maximum retrieval possible at one end of the spectrum and the maximum containment at the other end of the spectrum. He said some reviewers of the CP Strategy have expressed concern that this is shortcutting the CERCLA process. Briant said the strategy does not do this and focuses on the nine criteria of CERCLA, stakeholder input and regulator contributions. He said DOE believes having OUs within a geographic area is the most practical and reasonable action.

Briant reviewed the deep vadose zones on the CP. He said there is contamination that is far into the soil column, in some cases the contamination is a couple hundred feet deep. He said current technologies do not lend themselves to fully remediating these, so DOE plans to take the defense and depth approach, which consists of removing the source term, continuing research and development of new technologies, providing a barrier, providing monitoring in the vadose zone, and being ready to implement hot-spot remediation using groundwater treatment systems. Briant said this approach also relies on the CERCLA five-year review.

Briant reviewed the Outer Area waste sites. He said some ARRA-funded activities are in the Outer Area, such as the 200 North buildings being demolished, ponds being investigated and waste sites being dug up. He said the engineering evaluation/cost analysis (EE/CA) on these allow interim actions until the Outer Area ROD is completed. Briant said this is similar to the river corridor, where DOE sets cleanup standards it

believes are appropriate for final cleanup and pursue those actions believing the final ROD will support this work. Model groups (MGs) one and two, which are shallow waste site, are being completed. He said there are also scattered areas with relatively small waste sites and there is agreement that those waste sites should be dug up and relocated to a central disposal area. Briant said the ponds in the outer area will require more investigation and more discussion to reach an appropriate decision.

Briant reviewed the existing OUs. He said many major facilities have OUs associated with waste sites from the facilities, and these are done by process knowledge or characteristics. Since there is good agreement that geographical implementation would be preferred, the strategy calls for having four major decisions in the CP. Briant said the early decision will be on PW-1, 3, and 6 and CW-5 primarily because these units are ready for a decision and the agencies do not want to slow their progress. He said this is a difficult area because it contains a large carbon tetrachloride source and the most plutonium in the CP. The second decision relates to the key facilities in areas within 200-E and 200-W, and the balance of those areas would be brought into a final decision including tank farms.

Margo Voogd, DOE-RL, provided copies of the CP Strategy, a set of discussion papers and a roadmap of the discussion papers that extract blue boxes that may be developed from the discussion papers. She said DOE would appreciate initial feedback on the blue boxes, specifically the overall approach and key elements of the strategy.

### *Regulator Perspectives*

- Dennis said DOE is now proposing to say the 10 square mile Inner Area is a waste-management area, which is different than the end states discussion during which the agencies talked about bringing in different kinds of industries to maintain institutional memory. He said DOE is also proposing to develop a new reasonable maximum exposed (RME) individual, which is different than the standard industrial type RME, which has been used in the past. DOE is proposing a surveillance and maintenance worker and a trespasser, which is a different exposure scenario than the agencies have discussed before. Dennis said these are major policy issues the HAB should tackle. He said DOE has released two documents that include the assumption that DOE will to control the land for a long period of time, and this has implications for cleanup, such as ICs. Briant said DOE has had numerous meetings with high-level regulators and DOE management has read the CP Strategy numerous times and edited it to reflect their vision. He said the exposure scenarios are different because DOE believes being on a permanent waste disposal site would be different from being in another area in the rest of site, which it believes is reasonable and practical.
- Dennis said he has been involved with almost every CERCLA decision on the site and he did not think it was a good decision in the past to go from a geographic-based to process-based setting. He said some people think it worked well for characterization, and while he disagrees he thinks it can be fixed. He said what DOE is proposing is a way to fix that, but the question is whether this will address the issues created by process-based characterization. Dennis said DOE proposed one decision unit for the entire CP area, but revised this based on the negative reaction.

He said he would like to get back to the geographic alignment of OUs. The Aggregate Area Management Study was completed in the past, which Dennis said was a reasonable way to determine OUs geographically. Along the river there are six decisions for OUs that were well understood. He said a strategy for the CP that has more waste sites and fewer decisions does not seem effective.

- Dennis said there is a great deal of discussion about the technical basis documents and he is not clear what those will serve versus the traditional RI/FS process, and this dialogue will continue. He said he applauds DOE for putting the CP Strategy on paper and although he may not agree with every concept the fact that it is written down provides a platform for these discussions. Dennis said the Outer Area, with the exception of some ponds, and the groundwater being cleaned up to its highest beneficial use are strong decisions, and now the agencies must build a strong plan for the Inner Area. Regarding the technical document, Briant said DOE plans to run the scenario across every CP waste site and disclose what this implies about all of the CP waste sites so the public will have that information from a technical document. He said the strategy proposes the threshold and balancing criteria, and DOE can only guess on the final state and stakeholder acceptance until they provide feedback. Briant said this process will still occur, but it allows DOE to help understand the context of the individual decisions, which is part of the strategy.
- John said there were many good discussions during this process and the agencies found some areas of agreement, several areas that need additional discussion and some areas where the regulators do not agree with DOE. He said there are some TPA Change Packages coming to the agencies soon, and what DOE has done is written down its negotiation position and to give to the public, which provides a great opportunity for public input. John said unfortunately several major documents have hit at once, including the Consent Decree and TC&WM EIS, and the HAB will have to fit the CP Strategy into its workload. He said Ecology and DOE do not agree on the 200 SW-2 burial grounds, where DOE is proposing to stop phase three intrusive characterization. A second area of disagreement is that DOE and Ecology approach ICs in different ways procedurally. John said DOE wants to establish ICs up front, while Ecology's regulations say do the best cleanup possible and apply ICs if necessary. John said Dennis identified exposure scenarios as an issue, and said DOE is proposing an alternate RME level, which is allowed under MTCA but is a notable change from the current level. John said he thinks DOE softened its language on the tank farms so it is more consistent with Ecology's view. He said Ecology thinks the investigation series for the tank farms may take another 20 years, so there is a timing issue, but the way DOE talks about it in the CP Strategy has improved. He said DOE is still committed to regulatory integration process in the TPA.

### *Committee Discussion*

- Susan asked the advantage of shrinking the footprint from 75 to 10 square miles. Briant said it is the environmentally sound action, and federal law requires DOE to do this. By 2015 the river corridor and outer area could be complete. Susan commented that saying the cleanup will be complete is misleading and public knows there will

still be work taking place. Briant said DOE will still be installing pump-and-treat systems.

- Gerry said DOE is not shrinking the footprint if areas like the 300 Area are still undergoing active remediation. Briant said other than pump-and-treats, DOE believes it will have final RODs for these actions and the cleanup that will be completed by 2015 will match the final RODs, with the exception of the groundwater. Gerry said he would not call an area cleaned up if it still has pump-and-treat. Dennis said this cautionary note is important, and the agencies must be careful how they describe this. The reactor cores will still be in place, there will be active groundwater cleanup, and the K Area will still have work that needs to be completed.
- Wade said the problem with Westlake Pond and the boundaries of Gable Mountain Pond is that they are in the National Register as cultural resources, so a much larger dialogue is needed for these areas. Briant asked whether these are reasons to defer those decisions, or if DOE should move forward with its discussions. Wade said dialogue needs to be opened so the tribes can be involved. Briant commented that Westlake is particularly difficult to deal with and those discussions need to take place. Gerry asked why Westlake will be more difficult to deal with. Briant said Westlake historically had natural water coming to the surface. This meant the water level was significantly impacted by CP operations where the aquifer table was raised and altered, which increased the amount of water discharged into the area, and this had a salt residue on its surface. Briant said the wetland applications fit into this and there are also cultural sensitivities, so more discussion will be required. Wade said the chemistry of the aquifer in the area would be confined and there is a river influence.
- Pam asked whether there is a ROD associated with each decision unit. Briant said there is a ROD for each decision unit except for ERDF, which already has a ROD, and U.S. Ecology, which is permitted separately. For the waste management area surrounding the tank farms, DOE has divided contamination based on operations so releases, intentional discharges and contamination are virtually the same. Briant said in many cases plumes within soil have merged, especially in groundwater, so DOE believes it must have a consistent set of exposure scenarios, risk assessment and stakeholder input that addresses this in a uniform manner. DOE believes it should take contaminated soil surrounding a tank farm and make it part of a decision under CERCLA to include radionuclides and RCRA contaminants to meet RCRA requirements as an applicable or relevant and appropriate requirement (ARAR) to the CERCLA process.
- Maynard commented that for U-Plant and the waste sites DOE is assuming that the caps will never fail and it will not have to worry about the groundwater. He asked if DOE has considered digging up these waste sites if it is practicable. Briant said of the more than 1,200 waste sites on the CP, groundwater is almost exclusively impacted by intentional liquid discharges and the waste sites on the CP are not of a nature that they would be a threat to the groundwater. He said the groundwater is 250 feet below the surface, has a limited number of contaminants, is not mobile and should not be a threat if still under a cap. Briant said there are still sites of concern, and deeper into the CP Strategy there is a need to evaluate the threat groundwater poses to ecological and human health. He said the only difference in the CP is that the exposure scenarios

are different for the Inner Area than for the rest of the site. The river corridor is based on the premise that man-made structures and discharge is being removed, while in the CP there is permanent, intentional disposal. The CP Strategy assumes that DOE is not going to dig up ERDF, but DOE is also not considering that someone could build a house there. The plan calls for a forum to determine the technical bases to determine the ecological depth, which DOE believes is between 6 and 15 feet. The way groundwater is evaluated will not change and DOE will do all it can to remediate the groundwater. Maynard said the future problem with the groundwater is an issue and it seems that the decision has been made to cap these sites. He said he does not have a problem with this solution if it is short-lived. Briant said the strategy discusses a wide range of alternatives and continuing stakeholder and regulatory agency involvement. He said he has heard concern that the plan is too aggressive and DOE is making legal commitments it cannot meet. PW-1, 3, and 6 have been grouped based on similar chemistry and work will be started this year. For tanks, DOE plans to remove waste and shallow contamination and remove as much of the source term as possible.

- Wade said he had a chance to look through the document, and said the plan is a major undertaking that lays out how the CP strategy fits with the vision of shrinking the site. He said he sees some potential conflicts with the accelerated work being funded by ARRA backfiring because the logic is not in place to integrate the process. He said there are still major issues with looking at the vadose zone and he does not see a real focus on elevating this as an area that is creating a bigger impact. Wade said there is a need for a ROD for the vadose zone and he did not see much discussion of this because it was assumed that the vadose is not a significant problem, but he thinks more information is needed to determine this. He said the shallow versus deep vadose zone is not clear and he sees the potential for leaking. Wade said another issue is the need for a schedule for future characterization and he thinks it is premature to stop some characterization. He said in general he is pleased to see an effort to look at some of these elements, and commented that there is a need to look at groundwater and the plumes and add additional parameters to look at the depth of contamination and the volume.
- Dale commented that the CP Strategy is the best document DOE has released and it is admirable that so much work has been put together in one place. He said this kind of document really sets up the problem areas, which creates a place to work from. Dale said one issue that keeps coming up is that base assumptions are being made that influence the decisions in these documents and may be incorrect or misleading. He said the document assumes that actinides in the vadose zone are not mobile, but they should not be considered immobile. Dale said the vadose zone needs to be addressed and is the source of much of what is happening in the groundwater. He said in many cases these assumptions are driving decisions for things like capping. Dale said the materials under the cap may be mobile and the cap could re-route water so it flows through the tank farm. Briant said characterization is done initially, throughout the process and long term. For the deep vadose zone, DOE used a multi-faceted approach and is looking into different technologies that could further this process. He said DOE is proposing to remove the source term, continue research, put barriers to limit infiltration, conduct in situ monitoring, and implement a robust groundwater

treatment system to address any consequences. Briant said the five-year review would ensure this keeps working.

- Dale said he recently heard the concept that SSTs are being emptied, grouted and left in place, so that everything under the tank would be inaccessible. He said this is below the 15-foot exclusion zone, which affects people on the surface as well as the groundwater and vadose zone. Dale said DOE does not currently have a process for removing that material, but there are mining processes that do this and he does not think the characterization or the process have gone far enough to address this. He said DOE should not use language that implies the cleanup is being wrapped up, because even with this progress there is still a long way to go.
- Pam said the plan's goal of providing a holistic approach to remedy selection in the CP is excellent, but the documents are redundant. Briant said DOE did provide the document as well as fact sheets, which have key items drawn from the executive summary. He said the fact sheets and the executive summaries do contain duplication.
- Pam said one concept in the document is the possibility of looking at land use to drive decisions. She said the 200 inner area is categorized as industrial exclusive and the other land-use category is conservation mining, and she asked why mining would be a land-use category. Briant said this relates to gravel mining, and DOE utilizes a great deal of borrow material for caps or road building to avoid fire hazards and to provide access to certain areas.
- Pam suggested conducting a workshop on the CP Strategy document since the RAP has a heavy workload, and suggested this take place October 29. She said the base assumptions workshop also relates directly to the strategy, and this workshop could take place the first week of December. She said the TC&WM EIS will be released in October, and said the first week in December could include two Committee of the Whole (COTW) meetings – on the base assumptions and on the TC&WM EIS.
- Laura Hanes asked how much information is available on the budgets and staffing required for to the 2015 footprint. Briant said DOE had a commitment to provide a detailed resource-loaded schedule to get to 2015. He said DOE has expanded its goals and enhanced this with ARRA funding, so assumes it can get the funds needed to reach this goal. Laura asked whether DOE is anticipating budget increases or additional funds to meet ARRA funding. Briant said DOE-EM has a five-year plan on its Web site that provides the funding profile through 2014 then projects a 2.3-percent increase to account for the inflation flat line after this. He said DOE's funding profiles are based on this five-year estimate and, while this does not mean Congress will appropriate this amount, this estimate is conservative.
- Dick said a few years ago there was a rushed decision on a new plan that set a precedent of cleanup of the remainder of the canyons. He said he did not agree with this and did not believe it did an adequate job of evaluating options. He asked whether this decision will remain in place. Briant said under the CP Strategy plan the canyon buildings will be part of a regional decision, so there would not be a stand-alone decision for a canyon building, but would look at the waste site, canyon buildings and contamination from tank farms. He said this will be an alternative in the planning basis, but DOE is not committed to this. Dick said it is practical to pull the

canyons down to slab so the short-term problems go away and then approach cleaning up the rest. Briant said many of the canyon buildings do not have short-life nuclides because the fuel was aged before it was taken to the buildings, and once the fuel is dissolved these facilities can be decontaminated by stripping everything but plutonium and uranium. He said he thinks this is what DOE is looking at for the canyon buildings, but this is a public process.

- Susan said she asked about the size reduction because the idea that human and animals will be deterred by ICs in 50-100 years does not seem like a consistent rationale. She said the HAB has had LTS workshops and a monetary resource needs to be identified to ensure LTS is taken care of. She said there should be a human presence because land-deed restrictions are difficult without this presence. Briant said DOE is concerned about ICs and the only IC of importance is in the inner area above known burial grounds and other major sites, which has state and federal implications. He said DOE wants to ensure that enough contamination has been removed or there is enough of a buffer area around remaining contamination so plants, animals and people do not have to worry about ICs.
- Susan said she thinks any cleanup scenario needs to consider unintended consequences, especially how the remedial action could affect groundwater and the unintended consequences of caps. Briant said DOE still plans to do a wide range of exposure scenarios.
- Gerry asked what the timeline is for adoption of the CP Strategy and the drivers. Briant said the Agreement in Principle (AIP) that was signed last February discussed having a plan to the TPA and DOE extended this and delivered this plan at the end of September. He said DOE envisions working with the Tri-Parties to develop change packages to implement this by the end of the year. There will be formal public comment and workshops on this change package. Dennis said there are two proponents, which are the public policy questions embedded in the document that the agencies must solve, as well as the need to re-map the OUs. He said the biggest priority for EPA is to restart the RI/FS work.
- Gerry said he does not understand how the CP Strategy can be reviewed without public comment on the TPA Changes or review of the TC&WM EIS, which is supposed to inform decisions in the CP Strategy. Gerry said it would violate the National Environmental Policy Act (NEPA) to have a decision about a strategy for characterizing tank leaks and closing tanks, so adopting any decision document before adopting the TC&WM EIS would violate NEPA. He said the RAP should review the CP Strategy once the TC&WM EIS is released and the AIP has gone through public comment.
- Gerry said he does not think the process-oriented waste sites are effective. He said work such as remediating all landfills in the 200-W northern corridor and 200-E northern corridor landfills are geographic areas that could be funded. He said he does not think the HAB has adequately explored the implications of CERCLA taking over for RCRA for tank farms and there would not be an EIS if that was currently in place. Gerry asked how many staff the regulatory agencies have. Dennis said EPA has six full-time employees. John said Ecology has a total of 70 employees, who cover

multiple programs. Gerry said there are serious implications for this and there is a good reason DOE would like to use CERCLA rather than a more regulatory-driven process with more public involvement and RCRA-based decision-making for tank farms. He said there was a great deal of public comment on the AIP, which also had DOE taking over writing RODs. He suggested completing the TC&WM EIS and allowing a clearer geographical approach as part of the TPA Change Package.

- Susan asked whether the CP Strategy is a decision document. Gerry said there will be a decision document for each area but this plan includes common elements that would apply to each decision document. Briant said he would like exposure scenario, the risk assessment and common applied parameters to be established so each one is not decided slightly differently with different scenarios.
- Gerry asked whether DOE would decide the RI/FS for one piece and select the remedy but would largely have selected parameters for the decision in this document. Briant said most of the consistency would be achieved by making fewer decisions, so when he looks at 2-E or a piece of 2-E this would be consistent because it is all in one document. Dennis said the important area of focus is if the region decides using the 10 square miles as a waste management area is a good idea then this has implications for the RI/FS process and will require a public dialogue. He said this is called the threshold case and would be used to set levels for surface exposure. Dennis said when the agencies negotiate the RI/FS schedules and DOE presents its decision strategy EPA wants to keep PW-1, 3, and 6 and CW-5 and does not want to lose momentum on this. He said ultimately this can be used as a negotiating platform for the change packages and would like input on how this is negotiated.
- Shelley asked how the TC&WM EIS should be incorporated into the review of the CP Strategy. Dennis said the EIS has little effect on this CERCLA work, but is ultimately dependent on the RI/FS work. Briant said the RI/FS would still be the deciding factor to allow tanks to go forward but DOE is looking at what has gone into the soil and is proposing the CERCLA process considering both CERCLA and the radionuclides. John said on the DOE-ORP side he believes what DOE has written is consistent with Appendix I of the TPA and he does not think there will be RODs to make decisions on the tank farms, with the exception of C Farm. He said all of the pieces required to make a closure decision and provide CERCLA coverage will be in place for C Farm. Briant said the CP strategy addresses later steps of the process when the tank farms progress. John said the ROD amendments for T and B Farms, where the characterization may not happen for a long time, may be far in the future and the TPA requires a process for each area. He said he does not think DOE is proposing to change the regulatory process.
- Susan said the Board needs to respond to this in November and she needs framing questions from DOE and the regulators. Dennis said if the HAB does a workshop it does not need to be more than a recap. He said the agencies do not need advice in November but do need a sounding board. Dennis asked the RAP to provide framing questions it would like to see brought forward to prepare. Briant said the regulators are going to have a dialogue and the document will go to public comment in January. He said input on whether the HAB supports the concept enough to have the regulators participate with DOE to define the details is needed.

- Susan said the HAB will have an introduction and act as a sounding board at the October 29 workshop and its November Board meeting. Dennis said given the discussion on the Hanford Framework and the discussion on the CP Strategy, the workshop could meet many needs. He said the assumptions and implications in these documents need to be understood and they are intertwined. He said it would be helpful to send framing questions to the regulators. Susan Hayman, EnviroIssues, will distribute a link to the CP Strategy with a cover letter from Susan L.
- Maynard suggested that the RAP members provide feedback on the CP Strategy discussion papers as individuals, rather than as HAB advice. The attachment of this handout and the ones with a series of discussion sheets will be e-mailed to the RAP. This feedback will be provided at the workshop.

Central Plateau Cleanup Strategy - Next Steps (as captured on flip chart notes by Susan H.)

1. Intro and sounding board at November Board meeting – framing questions.
2. Workshop on October 29? COTW? To be discussed on EIC call. Issue managers will work on an agenda with agencies.

**Contract Integration of Groundwater/Soil Cleanup**

Wade reviewed the topic of contract integration for groundwater and soil cleanup. He said John Morse, DOE-RL, would provide a brief overview of how the various organizations interface and to see what they are doing in terms of the groundwater effort and the 300 Area work that is part of the recent proposed change package. Wade said there are workers on the ground doing physical work as well as national experts brought in to assist with these projects. He said after the high-level presentation and committee discussion the RAP can determine whether it needs a future discussion on this topic.

John said as part of the re-bid of the contract, DOE has worked to include a requirement in contracts that require the different contractors to interact. He said the CH2M HILL Plateau Remediation Company (CHPRC) contract has the lead for integrating soil and groundwater activities on the site. On the CP, the primary interaction is between CHPRC, which does the groundwater work, and the tank farm contractor, which conducts sampling. John said all of the data for the tank farms goes into the same database and the work is coordinated. CHPRC also works with WCH. He said before the contracts were finalized the DOE offices set up written agreements between Shirley Olinger, DOE-ORP, and Dave Brockman, DOE-RL, that designates which contractor is responsible for which work. All of the groundwater work is handled by one organization and on the river corridor the contractor is responsible for all remediation to the groundwater. John said DOE has working groups to coordinate these different efforts. WCH has a different type of contract than CHPRC that includes different incentives and the working groups must determine how different actions impact these.

John said in the D Area DOE has coordinated having some waste sites dug up earlier to help with the waste area RI/FS activity. CHPRC and WCH have worked together to develop RI/FS work plan documents, and John said this was the first time on the site that a document was produced jointly by two different contractors. WCH is responsible for the soil and CHPRC is responsible for the groundwater. There will be an RI/FS for both the soil and the groundwater, and there will be a final ROD for the soil and groundwater in each area. The same process will take place for the 300 Area. John said the final version of the RI/FS for the 300 Area was recently completed, and this was a joint effort by WCH led by CHPRC with support from the Pacific Northwest National Laboratory (PNNL), which has been doing work on uranium in that area. There is a broad scope of contaminants in this area, and the RI/FS work plan encompasses all of these and takes advantage of work done by PNNL and the Office of Science. John said the RI/FS packages for the 300 Area, 100 Area and BC Area are being jointly put together by multiple contractors, which requires many meetings and a great deal of coordination. This was included in the contracts and agreed to by site managers.

John said at a working level there are multi-project teams, or integration teams, that meet periodically to ensure RI/FS documents are on track. There is one team for the river corridor, and on the CP there is a 2-East integration team, a 2-West integration team, and a team working on characterization across the site. He said DOE tries to share information being done at the tank farms, including push technology, working to develop the technetium-99 probe, deep vadose zone work in the BC Area such as air flow tests and this spring's dessication test, and tank farm work such as the waste management area C PA workshops. John said DOE participates in these activities as part of integration and there are formal agreements in place, contract requirements, and routine working meetings to make sure work is moving forward.

### *Regulator Perspectives*

- Dib Goswami, Ecology, said in the past DOE provided a presentation for the HAB RAP every four to six months, which would be another way to address the multi-project teams (MPTs) and which contractor is completing which work. He said PNNL is doing the phyto studies and CHPRC does the groundwater work. He said to clarify who is doing what it would be helpful to do a regular update. John said the MPT structure was flexible and has been modified. Multiple contractors are included in MPTs, which consist of teams working in similar areas. Dib suggested that the RAP receive an update on MPTs, which were active during C Tank Farm and DOE-RL characterization. He said more updates are needed because of other activities, especially science and technology in the 300 Area.
- Dennis said now that he is in management he does not get to see the integration he used to, but he thinks DOE has done a good job with integration and it has been more difficult than imagined to get integrated discussions started. He said as a project manager getting to interact with the tank farm workers was valuable and understanding other programs is a positive step forward. Dennis said integration has been a 10-year process.

### Committee Discussion

- Pam asked whether ARRA funding is going to different places. John said ARRA money is going toward the groundwater, the 2-W pump and treat, the DX Area and many of the wells. He said these were large sections of the contracts that could be done by the end of 2011. Wade asked whether this includes foreign wells with the expanded chromium. John said this is part of the ARRA funding.
- Wade asked whether the analytical work for pump testing and analysis is done by PNNL only. John said that is a team effort. CHPRC just completed the pump test at EW-1 and subbed some work to PNNL, including a step-drawdown and long-term steady flow test, and next that well will be hooked to an existing system while the new plant is being built. John said the system has capacity, so DOE will institute a long-term steady test by shutting down all of the wells. He said CHPRC used PNNL for expert support. PNNL has their own funding from the Office of Science and DOE-EM, which is funding a study on uranium, and CHPRC is funding additional work by PNNL in certain areas to follow-on to additional technology work on phyto, apatite barrier work, and an additional sequestration test in the 300 Area.
- Pam asked whether DOE is still having monthly meetings on the groundwater. John said it does not still have monthly groundwater meetings, but holds different kinds of meetings.
- Wade said he was hoping to find out which contractors are involved and their ties to each other. He said this briefing pointed out the need for more focused presentations, on the 300 Area, the overall MPTs, the deep vadose zone and C Tank Farm.
- Pam commented that she appreciated being invited to the briefing on the 300 Area. She said a couple of years ago she asked what gathering information would do for future cleanup and remediation, but this has evolved and DOE is doing the science to further understand the area and determine next steps. She said there are still many unknowns and it sounds like these are not time-perishable issues. John agreed that these are not time-perishable issues.
- Pam asked whether there is funding on the horizon to keep doing the needed analysis in the 300 Area. John said there is, and DOE plans to continue to do additional characterization, especially related to the deep vadose zone, the dessication study, and the lab test for methods that might be used in the deep vadose zone. He said additional deep borings for uranium on the CP are planned for the B Area and around UW.
- Sandra asked when the 300 Area briefing took place. John said this took place a couple of weeks ago. Dennis said the briefing was primarily for regulatory agencies. Sandra said the tribes would like to hear about these briefings in the future. John said this was discussed in several forums. He said the invitation was sent to the integration teams and they hoped the word would get out from there, but DOE will take that under advisement.
- Pam asked who the RAP IMs are for the groundwater. Wade, Dale and Shelley are the IMs for groundwater, soil and the deep vadose zone. The focus for 2010 is to

maintain awareness of what is going on and future briefings are needed on the 300 Area, deep vadose zone, overall MPTs and future topics.

### **Update on the Plutonium Finishing Plant**

Pam introduced the update on the Plutonium Finishing Plant (PFP). She said she wanted the topic on the agenda because there is so much getting done at PFP and the potential of that facility being demolished to slab-on-grade years earlier is significant to the Hanford budget.

Ellen Matlin, DOE-RL, said the security costs can be reduced at PFP but will be used for the Canister Storage Building (CSB). She said PFP has big process facilities at 235-Z, radioactive material area (RMA) remote lines and 189 glove boxes and hoods. Ellen said the plutonium reclamation facility (PRF) has pencil tanks and is a very contaminated facility. She said the vaults have now been emptied of plutonium, which was a huge accomplishment. There are a few onsite shipments of slightly irradiated fuel remaining, which will be moved to CSB. Ellen said there are six casks of pins that are left which will be moved to CSB. The need for increased security at CSB will essentially offset the decrease in security requirements at PFP, so the overall security costs will be about the same. The fact that DOE will no longer have to upgrade the facilities at PFP due to the higher homeland security threat levels will save some money. Ellen said the main incentive is that there will no longer be a protected area, so waste trucks can come in and out, which will be big cost savings for PFP. She said the goal is to have the protected area removed by the end of the month.

Ellen said in the past year as de-inventory was completed the decontamination and decommissioning (D&D) work continued at PFP. There is a new contract in place with CHPRC that proposed completing this work in 2013, which is earlier than the TPA milestone of 2016. Ellen said there was not enough funding at first, but due to ARRA funding CHRPC was able to keep this date to 2013. She said ARRA covers disposition of the main facility and preparing it for demolition, including the removal of the glove boxes, HVAC system, piping and transfer lines. The outer and main facilities at PFP are covered by ARRA. Ellen said of the 232 glove boxes 51 have been removed. She said the contractor wanted to remove all of the combustible materials, including mobile office trailers, and removed 31 roll-off boxes full of combustibles. She said the biggest challenge of the project is to remove the process equipment and clean out those boxes. Ellen said the plan is to clean them to low-level waste (LLW) so they can be disposed of at ERDF, and some will have to be shipped to the Waste Isolation Pilot Plant (WIPP).

Ellen said there are currently 19 teams working at PFP. Some are still in training and will not be released until the March timeframe. Ellen said PFP got the first pick of the workers when work was being ramped up and tried to get workers who already had Hanford experience. The end state for PFP is slab-on-grade, and the current end state says once the facility is slab-on-grade there will be a temporary cover on the facility that will last 20 years, until a decision is made on whether DOE will cap the entire area. She said the CP Strategy includes a PFP zone, so she is working to see if it makes sense to put a

temporary cover on the area so the end state and completion dates are consistent with the CP strategy.

### **Regulator Perspectives**

- Ginger Wireman, Ecology, asked whether PFP is on a six or seven day work week. Ellen said the workers are on a five-day work week and are currently doing a great deal of overtime maintenance work. She said PRF is considered one space so sometimes teams work there at alternate times.
- Dennis asked where the pencil tanks were in PRF, and asked whether it is expected to come out as LLW. Ellen said the pencil tanks will be TRU and have a steel plate on the bottom. She said they are still working to determine whether they can clean that enough.
- Rick Bond, Ecology, said he walked through PFP last week and said there has been good progress. He said most of the documentation is in place and approved, and the work is ahead of schedule.
- Dennis said EPA hopes PFP does not end up with a temporary cap and is pushing a decision on PW-1, 3, and 6 because the natural follow-on to this work is all of the material in the PFP footprint. He said if this can be resolved it is not a big stretch to do a ROD amendment to add this and keep progressing.

### **Committee Discussion**

- Maynard said the total cost of security at the site is not changing because of CSB, and asked whether there was an increase in CSB security due to this cost going over. Ellen said there was an increase because of the spent fuel that was already there. Maynard asked whether this is equal to past PFP security costs. Ellen said what is at CSB is now classified differently as well, so if this had been left in place it would have doubled the cost. She said they have not hired anyone new to cover both places, which would have been an added cost. She said if this material was not removed from PFP both areas would have had to be protected.
- Pam asked if the pins are from the Fast Flux Test Facility (FFTF). Ellen said some are slightly irradiated fuel from FFTF and some are testing fuels. Pam asked if those pins are staying onsite. Ellen said they are for now, and DOE is looking for somewhere to put them. She said the mission at the Savannah River National Laboratory (SRNL) is now plutonium, so what will be done with the slightly irradiated pins has not been determined.
- Pam asked whether laser cutters are being used. Ellen said they are not.
- Dick asked whether the glove boxes remain intact. Ellen said these are put into a larger container and grouted in the void spaces as LLW will go to WIPP. She said for transuranic (TRU) waste these boxes need to be size-reduced.
- Maynard asked whether DOE considered compacting the glove boxes. Ellen said some are being shipped to Permafrix to compact. She said that was a recent decision.

Maynard said compacting than versus grouting and filling them would help reduce the volume in ERDF.

- Pam asked for a description of the pencil tank. Ellen said these are long, skinny tanks. The gallery glove boxes on the outside had pumps. She said the tanks were in the PRF and the configuration was pencils for criticality reasons.
- Dick asked what will happen to the below-grade working areas. Ellen said there are trenches and tunnels under PFP and any piping that is TRU will be removed. Anything LLW can be left until a decision is made. She said there are waste sites under the facility but DOE needs to make sure it identifies all of the areas.
- Dale asked the projected slab-on-grade date. Ellen said the TPA date is 2016 but the work is ahead of schedule.
- Susan H. asked about the opportunity for RAP to tour the PFP, and the committee agreed that this would be a great opportunity to go on site. Ellen said the control rooms are worth seeing although much of the process equipment has been removed. She said she would host a tour.

### **Committee Business**

The committee reviewed its six-month meeting calendar and potential November meeting topics.

### **Regulator Perspectives**

- Dennis said the work plan will be the first time to see the work being proposed to fill the data gaps in the 100 B/C Area, which is an important piece of work because ultimately the global work plan may allow policy questions to come up. He encouraged the RAP to look at the technical work to make sure the agencies fill the data gaps and make final sound decisions.
- Dennis provided recommendations on the work plans. For ZP-1, the project team has set up technical workshops as the work is taking place. He said if there is interest in this approach for the RI/FS then this should be done. Dennis said this would not be appropriate for a COTW discussion, as it is more of a technical discussion. He said he can work with DOE and the project teams and make sure HAB members are invited.
- Dennis said the vadose zone presentation and focus discussion will be a central discussion point at the October 29 workshop. He suggested doing a topic follow-up to this workshop.
- Dennis said DOE stated that there is enough characterization data to make a decision on the burial grounds, and suggested the RAP hear a status update of the characterization. Paula said DOE would like to cover this at the October 29 workshop.

### Committee Discussion

- The base assumptions workshop will take place before the HAB provides input on the 100 Area RI/FS work plan. The 100 BC Area technical workshop will potentially be offered in November adjacent to the next RAP meeting.
- The LTS/IC discussion is not time sensitive and will be postponed from November.
- The 300 Area RI/FS will be released on October 31. The committee will put a placeholder for its November meeting in case there is input from the regulators at this time.
- Maynard asked whether the IMs on the 300 Area RI/FS want to attend the workshop then suggest a briefing, if needed. The committee suggested adding this topic to the December timeframe.
- The TPA negotiation status update is outdated and will be moved.
- Preparation for the base assumptions workshop will stay on the November agenda. An IM call will take place next week. Dennis said whomever is on the call should also be involved in the October 29 workshop. Paula suggested incorporating Dale, Greg DeBruler and Shelley to integrate planning for the workshop.
- The pre-70 TRU waste remediation and ditches and their relationship to M-91 will be left on the November agenda. Paula said this is partially related to the M-91 workshop, and since it is part of the CP Strategy it may best be covered at the October 29 workshop. Dennis said an M-91 update is needed regardless. He said the agencies are close to a decision on PW-1, 3, and 6 and can brief the RAP anytime on what the agencies are doing with this pre-70 TRU. He said EPA is shooting for a proposed plan and ROD by the end of fiscal year 2010. Dennis said there are two aspects to this issue – solid waste, which is in the CP Strategy, and PW-1, 3, and 6, which is not in the CP Strategy and includes liquid waste disposal facilities that contained pre-70 TRU. He said DOE can provide an update on burial grounds, such as a volume estimate and the plans to date. For PW-1, 3, and 6 EPA can provide a more integrated discussion. Dennis said EPA can also cover CW-5, which are the trenches that delivered plutonium to PW-1, 3 and 6.
- Dale said there is ongoing lab work for the K Basin sludge.
- Pam suggested moving the LTS/IC topic to January.
- The committee discussed the need for the PW-1, 3, and 6 workshop. Dennis said he does not think another workshop is necessary. He said the agencies will come back to the RAP and discuss what they heard at the last workshop and how the FS was changed. He said the base assumptions workshop is based on issues in the 100 Area RI/FS, so he is not sure further discussion is needed on this issue. Pam asked whether there is a reason for the RAP to consider advice. Dennis suggested that if the project teams have technical workshops the IMs could go to those and see whether advice is warranted.
- Pam suggested adding an RI/FS follow-up to the holding bin. Dennis said if there are policy-area assumptions specific to the 100 or 300 Areas these should be noted. He

said one decision that was made is the use of the 150-year assumption, which does not apply to the river, but Dennis said it does. He said another assumption is the 0.1 RAD per day, which is applicable across the whole site. He said for the FS along the river there are no issues besides the catastrophic flood.

- Wade said there is a new push on the wells and modeling, and he would like the committee to track that issue. This was placed in the BIN with the 100 Area RI/FS.
- Susan H. commented that the workshops will help determine November priorities because there are so many uncertainties.
- Maynard said for December, the K Basin and PW-1, 3, and 6 may not be ready. He suggested that LTS could be covered in December. Dennis said LTS will be around for a long time and could be covered anytime in the next year. For the K Basins, Dennis said he has asked DOE and his staff to provide a briefing in the next few weeks so a presentation could be ready. He suggested this be a placeholder for December.
- Maynard commented that Bob Suyama and Doug have been working on LTS and it keeps getting put off. Pam said the TC&WM EIS is the first priority. Barb Wise, Mission Support Alliance (MSA), said LTS belongs to MSA so when they have a deliverable there may be a time after the first of the year for a briefing.
- Susan H. said there was a proposal for November committee week to be changed. She said there is a possibility that the 100 BC Area technical workshop could be on the Monday afternoon of committee week.

BIN (as captured on flip chart notes by Susan H.)

1. 100 Area B-C RI/FS technical workshop.
2. Briefing on M-91 change package – negotiated dates...out for public comment mid-December.
3. Part 61 – Waste Classification Rule-making changes. Does HAB want an opportunity to weigh in (TWC and RAP)?
4. Revisit need for advice on Hanford Framework at end of CPS discussion today.
5. October 29 workshop on CP strategy?
6. Update on MPTs (GW/Soils work) in 4-6 months?
7. 300-Area, deep vadose zone, C-Tank Farm, overall MPTs ---- Future topics.
8. Tour of PFP.

### **Action Items / Commitments**

- Susan H. and Susan L. will distribute information about the CP Strategy and request framing questions about that workshop from HAB members and regulators.
- An IM meeting on the CP strategy will take place from 9-10:30 a.m. October 14.
- Send November chart and six month-work plan to Pam by Monday, 10/12.

- Susan will send updated work planning table.

## **Handouts**

*NOTE: Copies of meeting handouts can be obtained through the Hanford Advisory Board Administrator at (509) 942-1906, or [tgilley@enviroissues.com](mailto:tgilley@enviroissues.com)*

- Central Plateau Cleanup Completion Strategy, DOE-RL, October 8, 2009.
- River and Plateau Committee FY 2010 Work Planning Table, October 2009.
- River and Plateau Committee 6-Month Work Plan, October 1, 2009.

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## **Attendees**

### **HAB Members and Alternates**

Shelley Cimon	Steve Hudson	Maynard Plahuta
Dale Engstrom	Susan Leckband	Gerry Pollet
Laura Hanses	Sandra Lilligren	Dick Smith
Harold Heacock	Pam Larsen	Gene Van Liew

### **Others**

Paula Call, DOE-RL	Rick Bond, Ecology	Dale Black, CHPRC
Briant Charboneau, DOE-RL	Dib Goswami, Ecology	Rob Piippo, CHPRC
Mark French, DOE-RL	John Price, Ecology	Janice Williams, CHPRC
Ellwood Glossbrenner, DOE-RL	Ginger Wireman, Ecology	Earl Fordham, DOH
Matt McCormick, DOE-RL	Dennis Faulk, EPA	Susan Hayman, EnviroIssues
John Morse, DOE-RL		Molly Jensen, EnviroIssues
John Neath, DOE-RL		Barb Wise, MSA
Margo Voogd, DOE-RL		David Berhard, Nez Perce
Jamie Zeisloof, DOE-RL		Mark Triplerit, PNNL
Stacy Charboneau, DOE-ORP		Greg Siuton, RL AMCP
		Jeff Lerch, WCH
		Dave Rowland, YN ERWM