

FINAL MEETING SUMMARY

**HANFORD ADVISORY BOARD
RIVER AND PLATEAU COMMITTEE**

*November 7, 2007
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 and Introductions

Jerry Peltier, River and Plateau (RAP) Committee Chair, welcomed committee members. Jerry announced he has accepted a job with the U.S. State Department that will take him to Africa for the next 12-15 months. Jerry said he has been on the Hanford Advisory Board (HAB or Board) since its inception and was hoping to spend more time on the Board since his retirement but felt this job offer was too good to pass up. Susan Leckband thanked Jerry for his service and wished him luck. Cathy McCague said the committee will need to select and nominate a new Chair.

Introductions were made. Cathy said it was too soon to approve the October meeting summary since it was just emailed to the committee. The meeting summary will be approved at the next committee meeting.

Groundwater Plume Registry

Jerry said the committee discussed Hanford’s groundwater registry at the last committee meeting based on the agencies’ responses to their groundwater advice (HAB Advice #197). He thought the committee needed to continue the conversation on how DOE tracks groundwater data and to provide additional input to Hanford’s groundwater registry. Jerry said the most recent groundwater report was not comprehensive enough to capture all of the information that needs to be stored. He said it is important to have a historical perspective on the groundwater plumes since new issues will affect them.

John Morse, Department of Energy - Richland Operations Office (DOE-RL), said the groundwater report Jerry referenced is an abbreviated version. He said the whole report contains metrics that track the plumes from year to year and must comply with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) & Resource Conservation and Recovery Act (RCRA) processes. John said they are required to review a remediated plume every five years.

John said DOE has a database and an annual report that tracks of all the plumes onsite in the same way a registry would. John said the groundwater database has a lot of historical data on plumes. He noted part of the problem is helping people to understand the depth and breadth of the information available. John did not feel that creating a separate registry would help solve this issue. John distributed some documents that serve the groundwater and vadose zone integration teams as a working tool for tracking groundwater performance and schedule. These documents are part of a commitment DOE-RL has with Congress to keep track of metrics. Janice Williams, Fluor Hanford (FH), said they distributed these documents at the last Board meeting and EnviroIssues has copies.

Frank Roddy, DOE-RL, explained to committee members the charts that indicate how high concentration areas of chromium have shrunk or grown as a part of pump and treat efforts. He said they have put these together as a first draft to communicate the activities in the twelve groundwater operable units. In a couple years DOE-RL will have pump and treat systems operating in these areas and will track how effective they are. Frank offered to come back to the committee in January or February to talk about how these documents were developed and designed. Frank also said DOE-RL has been working on an executive level summary for the groundwater report to annually track plume activities.

John said the groundwater performance documents clearly show that the more they dig the more contamination they find. John said this has assisted them in delineating the data better to zero in on the source areas. For example, in the 100 Area the carbon tetrachloride plume has grown but the high concentration areas are going down. These documents help DOE-RL evaluate the whole picture and decide how to remediate.

Karen Lutz, DOE-RL, highlighted a distinction between the two programs used to relay groundwater data. Karen said DOE-RL maintains a metric on their website for the public to track groundwater information, and they have a plume registry database that they utilize internally to track groundwater data from year to year. Karen wanted to clarify whether the committee was asking for improvements to one or both of DOE-RL tools. John added their database is comprehensive and identified geographically by waste site and operable unit which allows for numerous ways to seek information. He said the primary issue is how to make the database more accessible for the average person to use.

Regulator Perspectives

- Dib Goswami, Washington State Department of Ecology (Ecology), said he heard the committee request that soil as well as groundwater data be tracked in one place. He

said the soil contamination levels are almost twice the amount presented for groundwater. The annual groundwater report is now a compliance document and has to meet regulation requirement. This report t will not provide as much information on the vadose zone. Dib suggested the committee consider this when they think about if the groundwater report is sufficient and what else may be added.

Committee Discussion

- Rob Davis clarified that the committee's idea of creating a groundwater registry was not an original idea. Environmental Protection Agency (EPA) has used a registry throughout their cleanup sites as well as the State of Arizona and the United States Geological Survey (USGS) which would provide some examples for DOE. Rob said he felt the registry should have historical data as well as updates in one place. Rob said in the groundwater reports there is one sentence on some of the plumes. He recommended a comprehensive registry with all of the information in one place so you do not have to reference multiple reports. Rob said groundwater performance documents are great, but thought graphic documents get updated differently than a registry. He also expressed concern that DOE-RL used two dimensional plots and not three and focused on operable units which may not accurately reflect their change in status. Rob distributed a list of data quality items he felt should be included in a groundwater registry.
- Maynard responded to Karen's question about two separate topics the committee is discussing; an interactive web based tool on groundwater or providing input to the groundwater report. He suggested Rob's list of data quality items would assist doctoral students in their research. Maynard felt the Board should focus at a higher level in helping the public understand the issues. He said he can see the value of the detailed information, but the general public would not need that detail. Maynard also felt that the committee was not communicating what a registry is very well.
- Shelley Cimon said during a recent Site Specific Advisory Board (SSAB) meeting Jim Rispoli, DOE - Environmental Management (EM), indicated they are in the process of developing a plume registry that would be comprehensive enough for all DOE sites. Shelley has arranged for Mark Gilbertson, EM, to talk about that registry during the next SSAB Chair's call. John Morse clarified the plume registry Shelley is referring to mainly provides high level material and will not be as site specific as what the committee has suggested. Nevertheless, John thought it would be useful for the committee to review and to see where Hanford is at on the priority list
- Maynard commented that all the data seems to be available; it just needs to be summarized. Karen said there was confusion about the plume registry in the response to HAB Advice #197. DOE-RL was talking about a web based tool and wanted feedback on the effectiveness of this as a tool for the public to use. Karen said this is different than the technical databases they use internally to track all of the plumes.
- *Will the documents that John distributed go to Congress?* John said they already went to DOE Headquarters (HQ), and will probably go to Congress. Frank said they need to develop and attach an explanation of how to use the information to minimize misinterpretation. ..

- *These documents should show where the new technologies have been applied and whether they have been effective.* John said some of them do that, but it could be made more visible. Susan thought from a funding perspective this would help raise awareness about whether the funding allocated is working.
- *If I was a member of the public and had never been on site before, where would I go to begin researching groundwater?* John said they need to improve access to information for the general public to understand the process. DOE-RL has a groundwater website that helps people get started and summarizes some activities. John said they have the same problem internally; a department gets assigned a task and does not know who to ask for help. John said they are working on improving this.
- Rob wanted to reiterate the committee's request for a plume registry that contains a summary of historical and current information for each plume to be stored in one place. Having information in a central location will decrease problems for River Corridor workers who need access to historical data instead of acquiring new data. Karen said the issue of having information accessible so contractors can make cleanup decisions is a programmatic issue. Karen said she will pass along the suggestion to their program folks.
- Jerry said the agency presentation and committee discussion did define what the committee was looking for in a registry. One of the committee's concerns, however, was general public access to information and the committee should still focus on this. Rob said the name registry was arbitrary but disagreed that the committee's request has been met.
- Jerry thought the summary of the groundwater annual report is not detailed enough. John said the CD contains the whole report and is available on the website. Frank said he frequently uses the website and finds it easy to use because it is indexed so well. John added they are working on updating the website.
- John asked committee members to provide comments or suggestions to him regarding the metric documents. Frank said they will be updating the groundwater monitoring report in 2007. DOE-RL would like the committee to provide feedback in January or February.

Central Plateau Waste Sites Cleanup Update

Matt McCormick, DOE-RL, provided an update on the waste site decision making processes and groundwater operable units for the Plutonium Finishing Plant (PFP). He said they have been working to characterize waste sites in the Central Plateau over the past few years. Matt said a new operable unit was created to focus efforts on waste sites that would lead to a straightforward remedial decision.

Matt focused his discussion on MG 1 & 2 operable units. DOE-RL is developing a feasibility study to remediate these waste sites to meet a Tri-Party Agreement (TPA) milestone of having a draft done by the end of next year with input from EPA and Ecology. PW1, 3 and 6 were liquid waste sites that PFP and Purex used to dispose of

organic liquids. PFP operations to recover Plutonium (Pu) from the materials resulted in large quantities of organics and Pu releases. Matt said DOE-RL's proposed plan should be in line with the HAB groundwater values flow chart. DOE-RL is proposing to contain and remediate the CP 1 plume to the highest beneficial use. Matt said they struggled with how to configure the waste left on the Central Plateau to minimize environmental impact and to protect groundwater and surface use. Matt said their proposal is based on CERCLA requirements and he quickly outlined the process used to develop a remedy using CERCLA's seven step requirement.

Matt said they have submitted a draft for the ZP-1 groundwater plume to regulators. Carbon tetrachloride is the contaminant of concern because it drives the size and scope of the remedy. The Proposed Plan is to do a large pump and treat system to remediate the plume to drinking water standards. The size of the pump and treat is proposed at 800-1,500 gallons per minute which could become bigger because the estimate is based on a 10 percent engineering estimate. Matt said based on how the aquifer reacts it could take 10-20 years to remediate. John added their overall approach is to control and maintain the plume and they may have to do biocalcification to remediate some areas.

Matt said the waste sites associated with the groundwater plume do not have buried waste; they are cribs and trenches that received liquid waste from PFP or Purex Canyons. DOE-RL has done the Remedial Investigation/Feasibility Study (RIFS) for these three operable units and has developed preferred remedies for the 17 waste sites proposed in these plans. DOE-RL found that the Pu got into the soil fairly deep because of its discharge into the crib. Currently the Pu does not threaten the groundwater because it is bound in the soil. Matt said the threat to groundwater in these waste sites are contaminants such as technetium, cesium, and organics. The Pu does present a threat to surface contact if someone were to drill into these waste sites.

Matt said they struggled with these waste sites because Pu is deep Matt said they had to weigh the benefit of removing 15 feet of soil because Pu may be below, to the Environmental Restoration Disposal Facility (ERDF), and then deciding on the remedy for what remains. Matt also said since the Pu in the crib will not migrate it does not really matter where it is buried. Their remedy suggests using intrusion prevention devices into waste sites in case institutional controls (ICs) fail An example of such a device is to place rip rap (large boulders) in the ground to prevent people from drilling in this area. Other preferred alternatives for the operable unit is to use soil vapor extraction methods to remove organics and for tanks to remove the sludge, treat the soil where it has leaked, and stabilize the tank.

Matt said for PW3 operable unit, the preferred alternative proposed is for a partial remove treat and dispose (RTD) for the A7 trench and crib and a monofill barrier for two large waste sites. Those barriers are driven by the threat of groundwater contamination from waste disposed at Purex. Matt said these waste sites mostly received fission products but some sites received small quantities of liquid waste from Purex.

Matt said DOE-RL submitted these plans to EPA in September and are working to resolve comments and questions so it will be ready for public comment. . DOE-RL will then modify the plans based on the comments received and issue a record of decision (ROD). Matt thought the groundwater plan will probably come out first.

Regulator Perspectives

- John Price, Ecology, said the Proposed Plan for PW 1, 3, and 6 is important for the Board to weigh in on. John posed some questions for the committee to consider: If the Pu is not a threat to groundwater or the land surface, is it acceptable to leave in place? If it is not, and all of it cannot be removed, how much is acceptable to leave and how much should be removed? John cautioned that some waste may be pre-1970 transuranic (TRU) waste which will increase the cost. John said this activity may dominate Hanford cleanup for a long time. Jerry added these cribs are hot and could be dangerous clean up. John said it took DOE-RL a year to drill a well next to Z9 due to the high contamination controls required. The drilling resulted in one worker exposure during that time.
- Craig Cameron, EPA, said they are currently reviewing the plans and assured the committee they will choose a protective alternative. The question remains about what can be left behind in the shallow portions of the 200 Area where under normal industrial activity the contamination might be exposed. Craig said he would like a good justification for leaving the Pu if it is not a threat to groundwater because the Pu will be there for a long time, it is deep in the soil, and was mobile when it was first disposed. Matt recommended the technical experts on his team to discuss the scientific and empirical data in regards to Pu movement and threat to groundwater with the committee.

Committee Discussion

- *What is the timeframe for the RIFS?* Matt said the RIFS is scheduled for the end of 2008. He said the likely response is RTD giving little reason to spend money on characterization. DOE-RL expects a quick turn around from EPA and Ecology on the FS recommendations. They will then issue a ROD and put it out for public review. Matt said he will update the Board on the progress.
- *Do you have to wait for this plan to be approved before you can address the targets?* Matt said DOE-RL needs a decision document before they can act on the remedy. They plan to do an action memorandum, which is faster than issuing a ROD, on the BC Control Area to dig the soil out in April. This process. Matt said they can move forward with a getting compaction soil for ERDF from the Central Plateau which addresses the River Corridor contractor's need for clean soil.
- *Is there still clean soil going into ERDF?* Matt did not know but said they have changed the compaction requirements at ERDF which will reduce their need for clean soil.
- *Are all of these sites contaminated down to groundwater?* Matt said the radionuclide and organic contamination reaches groundwater. John said the carbon tetrachloride

carried some of the Pu down to groundwater because it continues to move but in general they find it at 60 feet. .

- *How far are the agencies in their review of the FS proposal?* Craig said the FS submitted in September is Dennis Faulk's, EPA, project so he was not sure of the status.
- *What is the surface area for these sites?* Matt explained since contamination can spread as it moves down, the footprint becomes larger under ground making the site possibly bigger than a typical trench size on the surface.
- *Did you only investigate six of these sites?* Matt confirmed they investigated six and used an analogous system to infer to the other sites which they will ensure later.
- *Have you talked with the tribes about this plan?* Matt said the tribes are supportive of the groundwater plan but have questions on implementation of the remedy. The tribes are also concerned about leaving any contamination on the Central Plateau. DOE-RL has a monthly meeting with the tribes and the State of Oregon to continue working through these issues.
- *During your discussions with the tribes, did you get a sense if they are willing to accept contamination left in the soil?* Matt said he was not comfortable representing their values on this topic. He said in general the tribes are leery of leaving anything in the soil. He said this issue gets into damages and injuries that will be a part of the National Resource Damage Assessment (NRDA) process. John added in a perfect world the tribes would like everything to be removed, but they realize material will be left.
- *What are your thoughts on integration?* John said there is awareness of the need for integration to make Hanford more manageable since it is so big. Craig commented that they have integrated project teams but need to ensure integration is part of the plans.
- *What is the plan for the piping where there have been leaks?* Matt said the pipes are identified in a separate waste site. DOE-RL is gathering information to make sure there is not a large piece of liquid in the pipes that would threaten the groundwater or surface exposure. John said the individual pipes associated with these cribs become part of IS-1 and will be included in the remedy.
- *This issue demands integration because of the amount of hot material in the pipes.* Craig said a certain amount of integration is done, but a more thoughtful process needs to happen. Matt agreed that they need to tie the pipes into the plans for the decision for these waste sites. Matt suggested that they outline the process for determining how the pipes will be dealt with in relation to the waste sites they are remediating for the committee at a later meeting.
- Karen asked when would be a good time to come back to the committee to discuss this topic. Matt said in January or February they will have the information, but would like to get agreement from EPA and Ecology on the threat of the waste sites. The February time frame might be better.

Committee Work Planning and Committee Business

Jerry said they have discussed ICs at previous meetings. Dennis Faulk has said an IC plan exists and Jerry thought the committee should have a presentation on this plan. Jerry said the Board has begun discussing values for implementing ICs and this needs to continue as the site gets ready to implement ICs. Harold Heacock suggested the committee needs to hear from DOE Legacy Management on this issue.

Karen clarified that DOE has an IC plan, but EPA does not. She said DOE has presented this plan to the committee in the past but perhaps the committee members have changed since then and it might be time to refresh. Karen said she understood from the last committee meeting that issue managers were going to meet with Matt McCormick to talk about how DOE is dealing with ICs. Karen suggested the issue manager need to look at how ICs are happening at other sites to evaluate what is working and what is not working and how it can be applied to Hanford. Karen recommended the committee invite Legacy Management when they have the background knowledge and their questions framed.

Shelley offered to help issue managers locate people at other sites to talk to regarding this issue. Shelley said the committee needs to do the analysis of what it costs to do ICs compared to cleanup. Dick Smith suggested those costs should be in the feasibility study. Maynard said he would also like to see which RODs have ICs as a part of them.

Karen clarified that DOE only has one ROD, the others are interim RODs. She said as these decisions start to come up a question for the committee to consider is what type of ICs should be implemented. This is where the information from the other sites will be valuable to help answer that question. Shelley suggested the Board probably needs to draft advice on when different ICs should be used as a part of a ROD. Maynard suggested the committee could do something similar to what they did with groundwater values chart.

Harold made the point that in the proclamation to establish the national monument, it says as land is cleaned up it can go to the Washington Department of Fish and Wildlife (WDFW), but WDFW has said they will not accept any land with ICs. Greg deBruler, Maynard Plahuta and Jerry Peltier were identified as the issue managers for this topic.

Supplement Analysis (SA) to Hanford Comprehensive Land Use Plan Environmental Impact Statement (HCP-EIS)

Bryan Foley, DOE-RL, said last month he provided a presentation on the background of the SA for this committee. He talked generally about what to expect to see in the SA and asked for input on the documents that would be germane to the evaluation of the SA. Bryan said the fact sheet he previously discussed is now ready for distribution and would like the committee's input on the fact sheet's outline.

Bryan said DOE-RL expects to have a draft for an informal public review in early February. They are also planning an informational workshop in early February after the draft release for those wanting more detailed information. Bryan said he has not had a chance to talk with other stakeholder groups but has touched base with the tribal officers. He said he wants stakeholder input by the end of the month so it can be incorporated into the draft.

Regulator Perspectives

- John Price said that DOE references extensively the HCP-EIS in cleanup documents and DOE does not look at the HCP-EIS in the same way Ecology does. For example, the HCP-EIS discusses the land being managed for the next 50 years, Ecology says at least 50 years from now and maybe longer. John said the SA should also reflect that most of the River Corridor cleanup will happen within the timeframe of the SA's five year review. Bryan said the purpose of the SA is to look at the previous years, but said he would bring back that suggestion. John added that in the original HCP-EIS, DOE said the SA would assist in planning for the next 50 years. DOE-RL now knows that the next five years the site will change due to the clean up schedule. John recommends DOE evaluate that now

Committee Discussion

- *What is triggering the SA?* Bryan said the purpose of the SA is in the fact sheet. The preferred alternative in the site-wide HCP-EIS should have been reviewed every five years. DOE-RL is three years late for that review and are therefore trying to evaluate it as a part of the NEPA review. DOE-RL plans to review it every five years from now on.
- *Have you talked to the City of Richland?* Bryan said they have not, but sent a formal letter letting them know this was happening. Karen asked if Pam could help DOE get in contact with the City because they have not received a response.
- *Have you considered the investigative report that the City of Richland issued on the 300 Area?* Pam Larsen said the City of Richland did the study because all of the 300 Area buildings were supposed to be torn down. Since then the plans have changed and the buildings are not going to be torn down so the City of Richland will also need to revise/review that study. Bryan asked Pam to provide him with the name of the document so he can consider it in their assessment.
- Gerry Pollet said the Board and the public have never commented on the decision to leave buildings in the 300 Area which is change from the last HCP-EIS. Gerry said the Model Toxics Control Act (MTCA) rules were changed to discuss leaving facilities and control in the 300 Area without specific public involvement steps to evaluate how the proposal impacts resources like the monument or shoreline. He commented that there are much more detailed rules about public input on future use and expectations on this land now.
- Gerry said since the HCP-EIS came out there was a national monument designation which received public comment. Gerry felt that in terms of likely potential land use

development, this could be a significant impact. Bryan agreed it is important to evaluate the monument designation and change in the use of resources. Gerry said the potential use of the region and access to the monument would be a significant impact to trigger a new HCP-EIS due to increased use that would have to be evaluated. Harold said one issue is the number of boat ramps that could be added to access the Hanford Reach side of the river. John Price said a presidential memo came out a week after the proclamation determined the national monument. President Clinton said in the memo to manage the rest of the land like it is a monument. John said he would send that memo to Cathy to distribute to the full committee.

- Harold said WDFW developed a management plan that would be worth looking at as well. Pam added WDFW's management plan considers more land use alternatives than what is prescribed by the Hanford land use plan. John agreed and said in the End State workshop he heard WDFW say they would have rangers live out on the monument which was not considered previously.
- *How much do you consider other land uses around the site such as the Black Rock proposal and the viticulture and agriculture?* Bryan said the general analysis includes issues such as land use, geological elements, and comparing existing policies with future policies. He said this is another good example of recent developments that may need to be considered and Bryan will carry that concern back to DOE.
- Pam Larsen suggested holding a half day stakeholder workshop. Bryan said they are doing that and have sent letters to the people who worked on the original HCP-EIS. Pam said she is suggesting Bryan should talk with the stakeholders together instead of each separately.
- Gerry suggested Bryan should talk with the people who have an interest in the Hanford Reach (Audubon Society, Nature Conservancy, Save our Wild Salmon, Duck's Unlimited, Pacific Coast Fish Association, tribal associations, Rod & Gun Club, etc.). Bryan said they did not send these people the formal notification, but have sent notification out to their list serve. Gerry did not think their list serve was comprehensive enough and asked that Bryan look at including the people/groups that commented on the monument plan. Bryan said he would consider revisiting who the interested stakeholders are.
- Bryan said the next step for this committee is to look at the draft HCP-EIS when it comes out and to assist with the formation of the workshop. Bryan said to expect a 30 day comment period, and because it is informal, DOE-RL will summarize the comments and discuss how comments changed the draft.
- *Did the Board weigh in on this the first time?* Barb Wise explained it originally came out as the Hanford EIS and the HCP was an appendix. There was no agreement among the Board so it was tabled. It came back in 1999 as HAB Advice that said the Board agreed with the renaming of the document.
- *Will the SA result in any federal register notice?* Bryan said it would not. It will result in a determination as to whether a supplemental EIS, a new EIS, or neither is needed. The determination will be part of the cover letter that completes the SA.

- *What triggers a determination that it needs a new EIS?* Bryan said there are criteria that are applied on a sliding scale that make the determination whether a particular change is significant enough. Bryan said DOE-RL will talk about this more during the workshop.
- Susan Kreid said at the last HAB Board meeting a piece of advice was issued on executive summaries and suggested that Bryan look at this advice before his team begins writing their summary.

Handouts

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

- Draft Hanford Comprehensive Land Use Plan Environmental Impact Statement (HCP-EIS) Supplemental Analysis, Bryan Foley DOE-RL, October 25, 2007.
- Site Registry Report, RAP committee members, October 2007.
- 100-BC-5: Groundwater Performance, DOE-EM & FH, 2007.

Attendees

HAB Members and Alternates

Shelley Cimon	Debra McBaugh	Bob Suyama
Rob Davis	Maynard Plahuta	
Harold Heacock	Jerry Peltier	
Susan Kreid	Gerry Pollet	
Pam Larsen	Mike Priddy	
Susan Leckband	Dick Smith	

Others

Pam Ankrum, DOE-RL	Melinda Brown, Ecology	Cathy McCague, EnviroIssues
Bryan Foley, DOE-RL	Dib Goswami, Ecology	Emily Neff, EnviroIssues
Karen Lutz, DOE-RL	John Price, Ecology	Janice Williams, FH
Matt McCormick, DOE-RL	Rick Bond, EPA	Barb Wise, FH
Carrie Meyer, DOE-RL	Craig Cameron, EPA	Bob Bryce, PNNL
John Morse, DOE-RL		Mark Triplett, PNNL
Frank Roddy, DOE-RL		Annette Carey, Tri-City Herald (phone)
		Peter Bengtson, WCH