

FINAL MEETING SUMMARY

**HANFORD ADVISORY BOARD
RIVER AND PLATEAU COMMITTEE MEETING
*April 11, 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 Committee (RAP) Chair, welcomed the committee and introductions were made.

There were a few minor changes to the March meeting summary. The committee approved the changes, and the summary was adopted.

M-15 Supplemental Characterization

Bryan Foley, Department of Energy-Richland Operations Office (DOE-RL), provided a presentation on the M-15 Supplemental Characterization work. Bryan made a few corrections to the maps provided; the map printed in portrait view is labeled 200 East but is actually 200 West. Bryan also introduced Mary Todd of Fluor Hanford, Inc. (FH) as the expert on the waste analysis in the Central Plateau.

Bryan’s presentation provided a detailed look at the characterization efforts. He provided more information on the Supplemental Remedial Investigation/Feasibility Study (RI/FS) Work Plan for the 200 Area Central Plateau Operable Units. He also outlined the need for supplemental investigation, explaining that the feedback received from the Hanford Advisory Board (HAB) and the tribes initiated much of the investment in the supplemental investigation. Bryan introduced a flow chart illustrating how the supplemental remedial investigation works towards a final decision. He discussed the planning approach and methods used to identify data needs and outlined the different model groups used to categorize the waste sites for characterization.

Mary Todd provided details of the characterization including the technologies that are being used and why they were chosen for each site. The techniques for collecting quality samples and drilling into hot sites have improved significantly. Better data is needed to understand contamination depth and assess the levels and the water contained in the soils. Mary walked the group through examples from sites in the 200 Area to outline how the supplemental characterization is being implemented. Mary outlined the concept of representative and analogous sites and how both are being used to confirm data on contamination. Mary also discussed efforts towards sharing sample data with the groundwater team when drilling boreholes, conducting a direct push or digging test pits.

Bryan wrapped up with the path forward and the schedule for the supplemental characterization. The schedule in the work plan shows major milestones associated with revised feasibility studies, where the characterization is going on, and how it will support the feasibility study. This is not the end of data collection. Bryan said DOE is committed to doing data collection after the decision is made and conducting confirmatory sampling. Bryan also expressed a need for informal input from HAB as the process continues. He noted there will also be more opportunities for formal input as documents are released for public comment.

Committee Discussion

- *What is the confidence level that all of the new waste sites have been identified?* Bryan said they have identified 98% of waste sites. Based on experience in the 100 Areas, there will be a few sites that pop up here and there, but they are minor occurrences of waste and nothing of significance. Bryan emphasized that a good process history exists, and it is normal for a few additional sites to come along. DOE looked at historical records as part of a comprehensive effort to identify all the sites. Their confidence level is very high that the majority of sites have been identified.
- *The work being done on representative and analogous sites was partly to strengthen the relationship between the two types of sites, but is there uncertainty about the relationship?* Mary said the historical data could not explain the differences in these sites. She said the discrepancy in the data caused them to re-think what they understood about the analogous sites.
- *Why was extra data collection planned post-decision?* In some cases the agencies agreed on a cleanup decision based on what they already knew for a site. It was agreed that, in these cases, the decision could move forward and some confirmatory sampling would be done after the decision to make sure the right information was used. If the data does not match previous knowledge about the site, then they would have to go back and change the plan. The plan has always been that every site would be characterized, either prior to the decision as part of the RI/FS or after the decision as confirmatory sampling.
- *Can you take High Resolution Resistivity (HRR) data and say definitively what we need to do?* Mary said FH is finding that there is a correlation between the

conductivity and the nitrate that is there. They are creating a correlation test at BC Cribs to strengthen their confidence in what HRR is really showing; a peer review will happen next week. Fred Mann, CH2MHill Hanford Group (CHG), said the data shows change, and they do not see that change under normal conditions. So this gives them ways to focus their research. It tells them what to look for. In the future they may be able to get a lot more information, but they are not there yet.

- *S10 area was covered over in the early 70's. During the fire that site burned, and there is a concern that there are elevated plutonium levels in Richland from that site.* Mary explained that right now there is a foot or two of dirt on the ground and nothing else has happened. They did characterization prior to the fire, so that data is available, but they have not gone back since the fire.
- *In the pictures of the direct push people are in street clothes. Why aren't they suited up?* Mary said there are different requirements. When drilling down, nothing is coming out so they do not have to have a suit. This technology is faster and cheaper than a bore hole.
- *What is the diameter of the hole in a direct push?* Fred Mann said the diameter is 1.5 inches. Mary added the direct push can get them down 25 feet and it is cheaper than the drilling. With a diesel hammer they have gotten down to 45 feet CHG has used a hydraulic hammer and had some success down to 100 feet. They want to be able to see the layer at the pond bottom to analyze it. This is the proposed process at U Pond and for Model group 5 as well.
- *Does the budget for 2008 include all of the sampling planned?* Bryan Foley said the work plan includes Volume 1 and 2. Everything that is scoped for 2008 is budgeted. The work plan is in regulatory review through the end of May and will get finalized after they review comments.
- *If you find something anomalous, do you have the flexibility to do interim actions?* Bryan confirmed that, yes, there is flexibility; a good example of this was the HRR studies. They have already discovered problems that have lead to more data needs.
- *Will you be starting any of these actions before 2013?* Bryan explained there is not a lot of uncertainty about the cleanup method at this point for Model Group 1 so it will allow them to get out and do the remediation quicker than the other model groups. Craig Cameron, Environmental Protection Agency (EPA), added they have not started reviewing the work plan yet. They have gone through the Data Quality Objectives (DQO) process and do not expect to see a lot of surprises from what they already decided in the DQO process. There might be some unique things that need to be dealt with in the work plan.
- *Has there been an effort to integrate characterization work with well decommissioning so opportunities to use those sites won't be lost?* Craig said he has been encouraging DOE to make sure they have a good reason to close a well and that they are logged before they are decommissioned. Mary Todd added they lost some a few years ago, but more recently they are being more careful. They now have 36 new wells logged.

- *There are 23 operable units, how many different contractors are there?* Bryan Foley said FH is the prime with few sub-contractors. Mary said there are about four contractors that write the RI/FS document.
- *Does the plan specify the samples and where the data is kept? You need the data to match the plan so the public can see that.* Work plans are in the administrative record and publicly available. The data that comes from this process will be recorded in the feasibility study.
- *Is there an outline for a product so every document looks the same and can be merged into one final document?* Mary said there is an employee at FH whose job it is to manage the consistency of reports and create the outline consistent with EPA regulations.

Central Plateau Ecological Risk Assessment

Bryan Foley, DOE-RL, and Roy Bauer, FH, began by refreshing the group on the central plateau Ecological Risk Assessment. Bryan emphasized that this talk about ecological data is separate from the discussion earlier in the morning about characterization. They gave an update on where we are headed and outlined the opportunities for external participation. The previous Issue Manager is no longer on the board, so Bryan would like to know who will take over as Issue Manager.

Roy Bauer said the ecological risk assessment is a four-year, four-phase activity. The majority of the work so far has been for human health risk assessment. Another task is the ecological assessment; they are trying to support those needs by gathering biological and soil data. This started in fiscal year 2004, and Phase 1 became part of Phase 2. The tank farm areas were determined to be part of the tank farm cleanup and so are not part of this risk assessment.

Phase 3 covers lessons learned from Phases 1 and 2. They determined data needs for the ecosystem health evaluation and built up data acquisition in this area. The deadline to complete the ecological risk assessment is December 2008. In March 2005, they took samples of hot sites in the BC Control Area; no chemical constituents were found, but there was some uncertainty and concern about cyanides detected in invertebrates. They could not determine if the cyanide was in waste sites or if these animals picked up the chemicals naturally. In the West Area they looked for intersection between the burrowing animals and carbon tetrachloride. Carbon tetrachloride exists in disturbed areas where animals would not live.

Roy also talked about West Lake, normally a small seasonal pond, a low spot off the Central Plateau. Water tends to accumulate in winter and dry up in the summer, but discharges from the Central Plateau had raised the groundwater level and made the pond permanent year round. Since discharging has stopped the pond has returned to normal; however, chemicals are concentrated in the pond at levels that could be harmful to animals/biota.

Roy briefly reviewed invertebrate and insect sampling methods. He described drift fences: they build fences so when insects approach the fence they walk along the length of it and fall into a can that is buried in the ground. They can then easily remove them from the can for sampling. Biota sampling uses another style of fencing to catch mice and invertebrates.

Regulator Perspectives

- Craig Cameron said they have involved one of their people at headquarters and he placed emphasis on good public involvement throughout the rest of the process.

Committee Discussion

- *Are you testing animals that are outside the Hanford site to compare natural animals to ones at Hanford?* Roy said they decided to focus their efforts on the Hanford site; they did sample animals from non-contaminated sites at Hanford. He will bring the idea back to his group. The same thing happened with Polychlorinated biphenyls (PCBs): it was found in animals but not in soils. There was anecdotal information about areas that might have been sprayed with PCBs; the animals are used as indicators.
- *What about fallout from bomb testing?* Roy said this is a ubiquitous world wide problem. Fallout levels at Hanford are similar to elsewhere around the world. They do not factor it in because it is considered to have a background level that is the same as elsewhere.
- *Have you sampled small mammals, rabbits, deer other larger mammals?* Roy said this is a significant question. The problem in an ecological assessment, and the problem with larger animals, is that they have a larger home base and it is harder to determine where the contamination came from. If you look at the smaller species you can infer with a model what the impact would be to larger species through the food chain. The smaller animals' home range lies within in the plot they are looking at and they can infer to a larger picture. Bryan Foley said the human health and ecological assessment are both needed.
- *What is the role of plants in all of this? Do you look at uptake in plants?* Roy said plants are considered to be a food source so they did radiological surveys. The work done in the river corridor involved some plant samples. Bryan said they are not looking at plants for the ecological assessment. John Price, Ecology, said the human health risk assessment will look at that.
- Barbara Harper suggested that DOE might be interested in talking to the people who go out and sample the tumbleweeds. Rob Davis added this could be secondary or tertiary but somebody should think about it.
- *Did someone do an off site evaluation of wind acquisition, and is this included in the ecological assessment?* Roy said they went to two offsite areas to sample soil. They looked for the contaminant that Pacific Northwest National Laboratories (PNNL)

thought was significant; those will be part of the study but the Ecology samples that were done will not be a part of the ecological assessment.

- Donna Morgans will be the new Issue Manager for the committee. The committee will be updated again in June.

Committee Updates

Vince Panesko reported on what he's learned about records management. He and Susan Kreid have had two meetings, one with the reading room people in the technology library and another with Gail Splett, DOE-RL, who is in charge of records management (RM). There is no money associated with RM in terms of incentives to contractors to keep good records; however, there is a new contract to include incentives. DOE has a number of systems in place, but Vince said the question he's asking is about the consistency in the record keeping across the contractors.

Other questions he's pursuing include:

- How is the data from 23 operable units going to be consistently collected?
- Do all the contractors understand how to collect it?
- How easy is it to understand?
- Does all the data that is collected go into databases?
- Is there consistency in collecting the data and storing it?
- Will it be accessible 20 years from now?

Vince said they will also get information on records disposal and plans related to the current (since 1989) moratorium on records destruction.

Vince suggested the Mound experience was a good one to look at: Mound had some information that somehow got contaminated, and then was shipped and buried at Los Alamos. Shelley Cimon added that DOE sent a team to Los Alamos to recover the records because they contained information about employee exposure. Vince noted there is always competition for funds and record keeping tends to lose. The Comprehensive Environmental Response, Compensation, and Liability Act (CERLA) process has a lot of data that will need to be stored and there needs to be a long range plan so people can access the info at later dates.

Committee Discussion

- Susan Leckband said there is an enormous amount of data that is being stored in Seattle. Some of the boxes are indexed, and some are not. 45,000 of those boxes are past their destruction date, and once the law suit is over a decision will need to be made about them. There is a schedule for all the documents. Since those documents have been frozen, the timeframe has changed. And a process needs to be created on how to keep and destroy the information. Susan wants to ask Gail Splett if the public could be involved in the process of deciding what to keep and what to destroy. She

also suggested looking at technology and the useability of the documents (i.e., what happened when technology changes and records cannot be accessed?).

- Rob Davis brought up the fact that ISO 9000 and 14000 have standardized systems for record management. Are these standards part of contracts?
- Susan Kreid suggested the group ask everyone with records in their personal possession to bring them to a central location so they can collect it all.
- How deep does DOE go in their approach to historical documentation? How do you transfer documents from one contractor to another? The documents in Vince's garage were left when he moved into his office. When he retired he took them home so they were not left there. How many other people have records with histories like this?
- Harold Heacock said number of documents and reports are pretty well preserved. What are not well preserved are specific record log books and formal documentations; most of that gets thrown out. Personal logbooks are up to each person. In one case when the job was finished Harold said that he had boxes of documents that were shipped over to the next person working on the job who threw them out. Harold suggested the group focus on un-documented information.
- Vince and Susan will continue pursuing these questions and come back to the committee.

Committee Work Planning and Committee Business

Committee calls and updates.

- Call is on for April 17th at 9 a.m. This will be a time to reflect back on presentations and data that has been gathered.

Topics for the next committee meeting

- Update on D Area chromium plume and apatite injection
- Update on Natural Resource Damage Assessments talks between DOE and Trustees
- Next discussion of the groundwater flow chart

Handouts

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

- Central Plateau Waste Site Supplemental Characterization, Bryan Foley, April 11, 2007.
- Map: Hanford Site 200 West Sites Planned Supplemental Remedial Investigation.

- Map: Hanford Site 200 East Waste Sites Planned Supplemental Remedial Investigation.
- Central Plateau Ecological Risk Assessment, Bryan Foley, April 11, 2007.

Attendees

HAB Members and Alternates

Shelley Cimon	Susan Leckband	Dick Smith
Rob Davis	Jerri Main	John Stanfill
Ken Gasper	Donna Morgans	
Harold Heacock	Jerry Peltier	
Susan Kreid	Vince Panesko	
Pam Larsen	Maynard Plahuta	

Others

Briant Charboneau, DOE-RL	Rick Bond, Ecology	Fred Mann, CH2MHill
Bryan Foley, DOE-RL	John Price, Ecology	Barbara Harper, CTUIR & NRTC
Karen Lutz, DOE-RL	Jean Vanni, Ecology	Lynn Lefkoff, EnviroIssues
		Emily Neff, EnviroIssues
	Craig Cameron, EPA	Roy Bauer, FH
		Michele Gerber, FH
		Mary Todd, FH
		Janice Williams, FH
		Mike Priddy, WDOH