

FINAL MEETING SUMMARY

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

There were no changes to the February meeting summary, and the summary was adopted.

Keith Klein, Department of Energy-Richland Operations Office (DOE-RL) Manager, thanked committee members for their time and effort to advise DOE on Hanford cleanup. Keith is retiring after eight years managing cleanup at DOE-RL. Several committee members thanked Keith for his willingness to work with the Hanford Advisory Board (Board) and its committees during his tenure at DOE-RL.

Pam Larsen expressed concern that it is a difficult time to lose a site manager while re-competing major site cleanup contracts. Keith said there is a lot of institutional memory at DOE-RL, and the contracting process is in good shape now that the requests for proposals (RFPs) are nearly complete.

Committee members encouraged Keith to write a lessons learned piece for his successor. Keith said he has considered providing some lessons learned from his experience with cleanup and working with the Board. Keith emphasized that it will likely take time to build trust with his successor and that it is easy for someone in his position to be intimidated by the Board and become defensive.

Pam invited committee members to provide questions for DOE to use in the hiring of Keith's replacement. She will pass suggestions along to DOE-Headquarters staff.

100 Area Cleanup Status

Donna Morgans provided an issue manager update on the status of 100 Area Cleanup. Donna reviewed two tables she compiled that categorize waste sites and help illustrate the status of waste site remediation in the 100 Area:

- 1) The first table categorizes waste sites by operable unit and lists the total number of waste sites, number of remediated and unremediated waste sites, and the number of waste sites included in the River Corridor Baseline Risk Assessment (RCBRA). This table includes revisions from Washington Closure Hanford (WCH), and is accurate through 2006.
- 2) The second table categorizes waste sites by waste site type and reactor area. This table provides the total number of waste sites, number of remediated and unremediated waste sites, and the number of waste sites included in the RCBRA.

Committee Discussion

- *Which waste sites are included in the risk assessment?* Donna said the purpose of the RCBRA is to verify remediated waste sites were adequately cleaned up prior to the risk assessment and establish an acceptable standard for application to unremediated waste sites.
- *Will a risk assessment have to be completed for waste sites not in the current risk assessment?* Donna said the risk assessment includes remediated waste sites. Unremediated waste sites were left out of the risk assessment because they lack soil sample data or were media other than soils. Steve Weiss, WCH, said the risk assessment verifies the standards used to remediate waste sites. The assumption is that future remediation will be adequate if these standards are met. The 106 waste sites included in the risk assessment should cover the range of contaminants of concern. Steve emphasized that the risk assessment does not make decisions or recommendations.
- *How does the risk assessment address the reactors?* Steve said the reactor buildings are in the process of being remediated and have not been declared clean. Donna said references to reactors in the risk assessment refer to the soil adjacent to the reactor areas, not the reactors themselves.
- *What is known about the unremediated waste sites?* Steve said analogous sites are used to determine appropriate cleanup strategies.
- Committee members generally agreed the tables should be presented at the April Board meeting. Harold Heacock suggested including a schedule indicating when the unremediated waste sites will be cleaned up.

- Donna will combine information in the tables with input from committee members for the April Board meeting.

Natural Resource Trustees Council

Barbara Harper, Confederated Tribes of the Umatilla Reservation (CTUIR) and Chair of the Natural Resource Trustees Council (NRTC), discussed the possibility of joint meetings between the NRTC and the Board. She indicated the Board and the NRTC have overlapping values, are interested in similar issues, and often request the same information from DOE. Topics of interest to the NRTC include: ecological risk assessments, 100 Area and 300 Area risk assessments, data quality objective (DQO) processes, groundwater issues, integration issues, biological reports, and restoration activities. Barbara noted that, unlike a purely advisory group like the Board, the NRTC can file lawsuits under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

The NRTC meets quarterly, and the fall meeting is a planning meeting, where the regulatory agencies and DOE discuss work activities for the coming year and help generate work. Barbara said she is interested in exploring potential meeting efficiencies between the NRTC and the Board.

Committee Discussion

- *Does the NRTC have a formal process and product?* Barbara said they provide input through findings, but developing them can be time consuming and problematic. For example, the NRTC spent a lot of time developing a reference site document, which DOE vetoed. Barbara said group product development has not worked for the NRTC, and it is difficult to obtain consensus with DOE as a participating NRTC member.
- Pam said it might be useful if the NRTC shared its findings with the Board. Barbara said she would like to be more diligent in communicating findings with the Board.
- *Have members ever considered separating the NRTC from DOE?* Barbara said members have frequently discussed a separation from DOE, but it is unclear how that can happen. Gerry Pollet commented that it is a clear conflict of the Trust law to have a member at the table with an interest in decisions that are made. Barbara said having DOE as a participating member does help the NRTC obtain DOE funding for studies.
- *How is the NRTC funded?* Individual cooperative agreements fund its work.
- *How permanent is the NRTC?* Barbara said the NRTC exists under CERCLA and the Clean Water Act, and is a viable group as long as there is a release of hazardous material that threatens natural resources.

- *Do other DOE sites have tribal treaty rights issues?* Barbara said the Los Alamos site has treaty rights. John Stanfill said there are some DOE sites where tribal nations are involved in cleanup decisions, but tribal involvement at Hanford has been more successful than at any other site.
- Barbara suggested the Board and the NRTC try having their members attend each others' meetings. NRTC meetings are usually held at the Washington State Department of Ecology (Ecology), and the next meeting is on March 20 and 22, 2007. Susan Leckband proposed having two or three Board members attend an NRTC meeting to identify opportunities for collaboration and relay this to the Board. She said it is important for both groups to know the issues the other group is working on. Several committee members identified legacy management and institutional controls (ICs) as topics of mutual interest the Board and the NRTC could work on together.
- Barbara will coordinate with Susan regarding joint Board and NRTC meeting opportunities. Susan and Jerry will attend the next NRTC meeting in March.

Groundwater Values Flow Chart

Jerry reviewed a new draft of the Board Groundwater Values flowchart. Committee members discussed whether to develop this product as advice or just focus on developing Board groundwater values.

Mike Thompson, DOE-RL, discussed principles of the current groundwater remediation approach. DOE is required to restore groundwater in the aquifer to drinking water standards. He described the prioritized groundwater remediation efforts:

1. Address groundwater contamination plumes reaching the river: they are of greatest concern and are the highest priority for cleanup.
2. Address contamination plumes from the 200 Area that are likely to reach the river (e.g., those that are high mass, high half life, recalcitrant, highly mobile, etc.).
3. Clean up all remaining groundwater to drinking water standards.

DOE plans to conduct groundwater remediation work under CERCLA using the Resource Conservation and Recovery Act (RCRA) as an applicable or relevant and appropriate requirement (ARAR).

Committee Discussion

- Maynard Plahuta suggested there needs to be another layer to the flow chart that indicates the length of time for reevaluation of negative responses to the flow chart's decision questions. This might include questions about the availability or practicability of technology.
- *What does the remedial design box refer to on the flow chart?* Jerry said a remedial design is required after the record of decision (ROD) is released, and is where the

cleanup activities are determined to achieve ROD. Pam suggested this secondary process should be included as a separate chart(s). Pam suggested referring to the decision-making tool box created at Rocky Flats, which is available on the Rocky Flats Web site.

- Maynard said the first question of the flow chart should ask whether there has been adequate public involvement.
- Maynard said two decades is not a reasonable timeframe for achieving natural attenuation in all situations. Committee members generally agreed the Board needs to discuss a more appropriate timeframe for achieving natural attenuation, and that risk may be the appropriate driver for making decisions. Maynard said this also ties into the status of available technology, and whether there are interim remedies to address contamination in the short-term if technologies do not exist. Maynard emphasized prioritizing higher risk areas. Donna said that if a resource cannot be restored to its highest beneficial use, there need to be standards for addressing an appropriate contamination level.
- Harold Heacock wondered whether groundwater contamination concerns should be focused on groundwater, at the point of release, or at the point of utilization. Gerry said the presumption is that groundwater is a valuable resource that needs to be restored in the ground. There are Institutional Controls (ICs) preventing someone from drinking this water today, but there may not be in the future, so it is important that the groundwater be cleaned up.
- To improve the graphic communication of the flow chart, Ken Niles suggested developing a professional graphic logic chart, based on standard logic chart conventions. Committee members generally agreed this is a good idea once the flow chart content is more final.
- Gerry said the goal of groundwater cleanup is missing from the flow chart. There needs to be a box asking whether the proposed decision achieves the specific remediation goal. If not, the flow chart should loop back to specific actions such as increasing funding or technology.
- Maynard emphasized making value statements or questions and avoiding making assumptions in the flow chart. Most people will refer to the chart and not the accompanying text piece describing the Board's groundwater values.
- Jerri Main suggested making the flowchart questions and policy statements as pithy and brief as possible.
- Maynard wondered whether the pre-remediation activities should be near the beginning of the decision process flowchart, since they are supposed to be done prior to applying the flow chart questions and values. Jerry said the flow chart is meant to indicate that the pre-remediation activities occur before the remedial process.

Maynard expressed concern that depicting the process this way seems to create a disconnect between the flow path and the decision path.

- Gerry suggested adding a preamble box describing how the flow chart should be used.
- The issue managers will continue working on the flow chart. Maynard will work with them to review and revise the flow chart.

Draft Advice on Records Management

Vince Panesko described records management concerns and questions that were developed by Susan Kreid, Jerri Main and Shelley Cimon. Concern about records management and where contractors obtain information arose at the recent stakeholder workshop to address Operable Units, 200-ZP-1 and 200-PW-1. New contractors who were hired to prepare the RI/FS were struggling with the massive volume of historical documents, most of which did not contain useful data.

Susan Kreid, Vince, Shelley Cimon, and Jerri Main came up with a list of questions organized by the following topics: institutional memory, records management process, organization of Hanford archives, and access to Hanford archives. Vince believes it is important for the Board and for the public to have confidence that records archives are maintained for perpetuity and made available for long-term stewardship and evaluation processes such as the ones required in CERCLA and National Environmental Policy Act (NEPA). The characterization data for contamination buried at Hanford needs to be maintained in perpetuity and not lost, e.g. burial grounds used by 300 Area.

Vince noted that the DOE website does not have a direct link to the DOE Public Reading Room. The public has to go to either the DOE-RL or DOE-ORP webpage where there are links to document sources which get to the public reading room. Once the user finds the public reading room website, there is excellent overview information which Vince handed out; however the actual retrieval system is complex and requires that the public and new contractors seek training from the staff in the Public Reading Room. There is no self-help guidance on the website that is sufficient for a new user to use the system without a great deal of trial and error.

Gail Splett, DOE-RL Records Officer, attended the meeting and offered to make a presentation at the next RAP meeting. She said contractors receive training in records management regarding which documents should be submitted and catalogued. She noted that DOE-RL ceased destroying certain record documents in 1989 due to pending litigation. Beginning in 1989 all record documents were saved regardless of their value. DOE has been given permission to begin destroying those records since 1989 which are no longer of value.

Committee Discussion

- *What is meant by destruction of records?* Gail said there are some records that are maintained permanently (photos, real estate records, etc.), while other records, such as contracting documents, have no lasting value and will be destroyed.
- *Who makes the decision which documents are managed permanently?* Gail said the National Archivist has oversight of Hanford records. She said DOE makes recommendations about which records should be managed permanently, but does not have decision-making authority. She said records are currently being kept in boxes because of a moratorium on records destruction.
- *Does the moratorium apply to all Hanford records?* Gail said the moratorium on records destruction applies to all records. Records of the boxes that are destroyed are maintained.
- Vince, Susan Kreid and Jerri Main will meet with Gail to review records management systems and develop a presentation for the committee. A key question is (given the layering of subcontractors,) how does DOE keep the lower tiered contractors linked into the system to preserve critical documents which explain the condition of waste and waste sites at Hanford.

Update on 100 D Groundwater

Mike Thompson provided an update on Chromium (Cr) remediation. He reviewed the \$10 million appropriation in Fiscal Year 2006 (FY06) for groundwater remediation of contaminants reaching the Columbia River. Over half of the funding is being applied to Cr remediation. DOE-RL is using a systems approach to address Cr contamination in the 100-D Area. There are two contamination plumes in the 100-D Area, and remediation efforts are focused on the upstream plume. The In-situ Redox Manipulation (ISRM) permeable reactive barrier is being used to convert CrVI to less-harmful CrIII. Micron-sized iron is being injected into the barrier to mend and support its ability to convert Cr to a less harmful form. Finally, a nutrient (calcium polysulfide) injected behind the ISRM barrier will feed microorganisms and create an environment to convert CrVI to CrIII.

Mike said identifying the source of Cr contamination is essential to ensuring these remediation efforts address the Cr plume. Chromium concentrations of 10 parts per million were found in a well, which is the highest Cr concentration ever measured at Hanford. DOE believes this may be one Cr source, but Mike cautioned that the Cr source could still be in another location.

Scott Petersen, Fluor Hanford (FH), explained the concepts of the project to refine the source area for the Cr plume flowing into the ISRM barrier. The purpose of the project is not to find the source of Cr in the vadose zone, but to use groundwater to refine the area of vadose zone contamination. This will increase confidence in the deployment of remediation activities from the surface. FH is currently halfway through the data collection effort and will be drilling seven boreholes. Data from the initial boreholes will direct where the remaining boreholes are drilled. FH will monitor CrVI for six months

and take hourly groundwater measurements of Cr concentration. These data will enable FH to produce a geostatistical interpretation to identify the area with the highest probability of Cr in vadose zone. The project will have applicable use at other areas with similar contamination conditions.

Regulatory Perspective

- John Price, Ecology, said he is encouraged by the results of the remediation technology identification program. He said this is a cleanup success story. There could be a number of Cr contamination sources, so he is unsure whether the high Cr concentration is indicative of the Cr source. Ecology is pleased DOE is putting together integrated groundwater and vadose zone contamination efforts.
- Dib Goswami, Ecology, said finding the Cr source in the vadose zone is very difficult, and DOE's approach to identify Cr through groundwater is an appropriate approach.

Committee Discussion

- *Is the area with the high measured Cr concentration affected by fluctuation in the groundwater level?* Scott said the area is affected by groundwater fluctuation, which is the reason FH is conducting hourly water monitoring.
- *How deep will the boreholes be?* Briant Charboneau, DOE-RL, said the boreholes will reach groundwater at 80 feet below the surface.
- *If the area of high Cr concentration is identified as the Cr source, what process is used and how long is the waiting period to determine whether there are other sources?* Mike said a six-month monitoring effort is put in place to make sure Cr contamination is addressed. John Price said this approach is being developed in the integration plan.
- *Where does the funding come from to start remediation activities?* Mike said the funding comes from Congress. Typically, new federal projects take about two years to implement. DOE-RL also has a backlog of activities in the baseline. If an activity is a higher priority, DOE-RL can change the baseline to fund the activity. Briant said the high Cr concentration source is a high priority, and DOE-RL will take action to address this contamination before the end of Fiscal Year 2008 (FY08). He noted that DOE-RL does not have a firm budget for Fiscal Year 2007 yet, so it is difficult to say when the remediation activity can begin.
- *Is DOE-RL consulting historical records as part of the effort to identify groundwater remediation activities?* John Price said WCH performed site walk-downs and reviews, so an effort has been made to identify historical activities.

- Committee members generally agreed an update on groundwater remediation in the 100 D Area should be provided at the April Board meeting. Mike said DOE-RL can provide an update on all nine remediation technologies that were funded. Susan Leckband emphasized making sure to include the groundwater and vadose zone integration efforts in the presentation to the Board.

Committee Work Planning and Committee Business

Committee members decided a March committee call is unnecessary, but an April committee meeting is necessary.

Future committee meeting topics include:

- Records Management update
- Groundwater flowchart
- M-15 supplemental characterization
- Modeling concerns for feasibility studies and TC&WM EIS (overlapping issue with Tank Waste Committee)
- Groundwater management plan

Donna will develop a table categorizing the 300 Area waste sites.

Karen Lutz, DOE-RL, said the final CERLCA Five-Year Review is complete. DOE-RL inadvertently left out the Umatilla Tribal Nation's comments, which have been incorporated into the response to comments revision and is available on the DOE Hanford Web site.

Action Items / Commitments

- Donna will combine information in the tables with input from committee members for the April Board meeting. Donna will also develop a table categorizing the 300 Area waste sites.
- Barbara will coordinate with Susan Leckband regarding joint Board and NRTC meeting opportunities. Susan and Jerry will attend the next NRTC meeting in March.
- Vince and Susan Kreid will meet with Gail Splett to review records management systems and develop a presentation for the committee.

Handouts

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

- 100 Area Cleanup Status, table of waste sites categorized by operable unit, Donna Morgans, 3/7/2007.

- Summary of Waste Site Types in the 100 Area, table of waste sites categorized by type and reactor area, Donna Morgans, 3/7/2007.
- HAB – Groundwater Values, Shelley Cimon, Rob Davis, Jerry Peltier, and Gerry Pollet, 3/7/2007.
- Ground Water Decision Path, Shelley Cimon, Rob Davis, Jerry Peltier, and Gerry Pollet, 3/7/2007.
- Draft Advice on Records Management Processes at Hanford, Vince Panesko, 3/7/2007.
- DOE Public Reading Room, 3/7/2007.
- Hanford Technical Library, Technical Reports, 3/7/2007.

Attendees

HAB Members and Alternates

Ken Gasper	Vince Panesko	Dick Smith
Harold Heacock	Bob Parazin	Keith Smith
Pam Larsen	Jerry Peltier	John Stanfill
Susan Leckband	Maynard Plahuta	Gene Van Liew
Jerri Main	Gerry Pollet	
Donna Morgans	Wade Riggsbee	

Others

Briant Charboneau, DOE-RL	Dib Goswami, Ecology	Barbara Harper, CTUIR & NRTC
Karen Lutz, DOE-RL	John Price, Ecology	Karen Caddey, CHG
Keith Klein, DOE-RL		Lynn Lefkoff, EnviroIssues
John Sands, DOE-RL		Jason Mulvihill-Kuntz, EnviroIssues
Gail Splett, DOE-RL		Scott Petersen, FH
Mike Thompson, DOE-RL		Barb Wise, FH
Jamie Zeisloft, DOE-RL		Annette Cary, TCH
		Steve Weiss, WCH
Steve Wiegman, DOE-ORP		Gary Boothe, WDOH