

**FINAL MEETING SUMMARY**

HANFORD ADVISORY BOARD  
RIVER AND PLATEAU COMMITTEE

*May 8, 2013  
Richland, WA*

Topics in this Meeting Summary

Opening..... 1

Advice Development Regarding the 300 Area Remedial Investigation/Feasibility Study and Proposed Plan Revision 0 ..... 2

Advice Development Regarding 100-F Area RI/FS and Proposed Plan Draft A and Long Term Stewardship/Land Transition ..... 4

Impacts from the Tank Closure and Waste Management Environmental Impact Statement Modeling on Future Cleanup..... 8

Committee Business..... 9

Attachments ..... 10

Attendees ..... 10

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

**Opening**

Pam Larsen, River and Plateau Committee (RAP) chair, welcomed the committee and introductions were made. The committee tentatively approved the April meeting summary and agreed that the summary can be further discussed if additional edits are received. There were several questions on wording in the summary. RAP members clarified some of the language and were asked to provide EnviroIssues specific comments on any unclear or inaccurate language if there are additional questions about the summary.

*Announcements*

Susan Hayman, EnviroIssues, noted she is facilitating the meeting in place of Hillary Johnson, EnviroIssues, in order to reduce travel costs since Susan is facilitating Hanford Advisory Board (Board or HAB) committee meetings on the day before and after the RAP meeting.

Michael Turner, Mission Support Alliance (MSA), introduced himself and said he will be taking over for Barb Wise, MSA, who has retired.

## **Advice Development Regarding the 300 Area Remedial Investigation/Feasibility Study and Proposed Plan Revision 0\***

### *Introduction*

Dale Engstrom, Issue Manger (IM) for the 300 Area Remedial Investigation/Feasibility Study (RI/FS) and Proposed Plan (PP) Revision 0, introduced the draft advice (Attachment 2). He said RAP had the opportunity to read and comment on Draft A of the 300 Area RI/FS and PP. The draft advice under consideration comes in response to how the Board's previous comments were used or not used. The Tri-Party Agreement (TPA) agencies decided to follow a different approach than the approach described in Draft A. The new approach, which involves applying polyphosphate to sequester uranium in the most concentrated areas, is included as an addendum to the report. The Board would like the U.S. Department of Energy (DOE) to develop a testing plan (treatability test) to determine whether the approach is effective and if it could be used in other areas of the Hanford Site, such as in the Central Plateau. The central point of the advice is that the Board does not believe the Record of Decision (ROD) should be considered final until a treatability test is completed that demonstrates effectiveness of the remedy.

### *Agency perspectives*

Mike Thompson, DOE – Richland Operations Office (RL), said DOE appreciated the Board's advice on Draft A of the 300 Area RI/FS and PP (HAB Advice #257). That advice was thoroughly considered during DOE's negotiation with the U.S. Environmental Protection Agency (EPA). This draft advice is very consistent with the earlier advice and DOE's response will likely be similar to the response given to the earlier advice. Mike said a determination of effectiveness will be included in the remedial work plan that will be issued after the ROD is issued.

Emy Laija, EPA, agreed with DOE that the agencies are likely to reiterate their response to HAB Advice #257 since both pieces of advice are very similar. If the Board would like more of a response, they may want to consider rewording the advice to go beyond reminding the agencies of the previous advice. Emy noted that the first advice point could be very useful to the agencies. EPA has been working closely with DOE to move forward with the 300 Area PP and ROD. EPA would also like DOE to issue an interim ROD instead of a final ROD but that decision is made at a higher political level so advice on interim RODs will not likely be well received. It may be possible to implement a treatability test if the option for an interim ROD is unlikely.

### *Committee discussion*

---

\* Please see Attachment 1 – Transcribed Flip Chart Notes for key points/follow up actions recorded during the committee discussion.

*Note: This section reflects individual questions, comments, and agency responses, as well as a synthesis where there were similar questions or comments. Questions, comments, and responses were provided by HAB members unless noted otherwise.*

C. There was a concern that the first advice point seems to imply that DOE can bypass the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as well as the RI/FS by completing a treatability test. The Board should not advise DOE to do anything that does not align with the regulations. The FS requires a treatability test.

*R. [EPA] The advice is not outside of the regulations. Language in the advice can be further defined if the meaning is not clear.*

*R. [DOE] There is no requirement under CERCLA for a treatability test and no CERCLA requirement for an RI/FS. The only requirement is for a PP and a ROD\*.*

C. The Board asked DOE to complete an interim ROD in the previous advice. The Board does not believe there should be a final ROD for 300 Area until a treatability study is complete.

*R. [DOE] The distinction between interim RODs and final RODs is an artifact of the need to discriminate between interim actions at the Hanford Site. RODs are always reviewed for protectiveness every five years. Completing an interim ROD because of the uranium piece would negate three years of effort because the 300 Area cleanup involves more than just uranium sequestration. DOE decided to move forward to meet the milestones.*

C. RAP is concerned that if the treatability test is not successful DOE will not look for additional alternatives and will revert to Monitored Natural Attenuation (MNA)

*R. [DOE] DOE has been studying various alternatives for decades and will continue analyzing new technologies in case the remedy is not protective. DOE does not plan to rely on MNA. At this point, DOE has not identified another method for treating uranium. RTD would be prohibitively costly and would likely lead to greater contamination than if the uranium were left to attenuate. DOE will continue to look for other technologies that could become available in the future if the current sequestration approach does not work but at this point sequestration is the best available option.*

C. The Board has been under the impression that final RODs are the ultimate decision documents. According to DOE, RODs capture a moment in time and can be revised if they are found to no longer be protective. The Board should not ask for administrative activities when DOE is taking the desired actions.

---

\* This statement was clarified by DOE staff and Board members after the meeting. The RI/FS is a requirement of the CERCLA process.

C. For all intents and purposes, the decisions made in these RODs are considered by DOE as the permanent solution for the problems. DOE does not make a decision for the RODs expecting any changes, so these can be considered as *final RODs*.

C. It is important for the Board to include a statement in the advice that DOE should be working under an interim ROD in the 300 Area. The Board would also like a treatability test since the RI/FS will not really be finished until treatability testing is complete. Decisions should not be made without the knowledge of whether that decision is going to work.

*R. [DOE] The 300 Area RI/FS is complete. DOE has been investigating cleanup options in the 300 Area since the TPA agreement was signed 24 years ago and DOE now needs to make a decision. Phosphate injection is the best option available. If this approach does not work, uranium treatment will be technically infeasible and DOE will use enhanced attenuation, which is different than MNA. Enhanced attenuation involves treating uranium "hot spots" so uranium will attenuate more quickly than by only using MNA. The uranium will attenuate in approximately 50 years but DOE would like to reduce that timeframe through sequestering some of the material in place.*

The committee agreed to remove the reference to "final ROD" in the advice, and to drop advice point #4. The advice will reference HAB Advice #257 as part of the background instead of as a separate advice point. There were no further objections to the advice as edited. It will be sent over email to the entire RAP committee for final consensus before being brought forward at the June Board meeting.

*Public comment*

Q. Can DOE freeze the groundwater in place?

*R. [DOE] The groundwater in the 300 Area has a high velocity. The temperatures that would be required to freeze the groundwater are extreme and would need to be maintained forever. It would not be feasible.*

**Advice Development Regarding 100-F Area RI/FS and Proposed Plan Draft A and Long Term Stewardship/Land Transition\***

*Draft Advice re: Remedial Investigation/Feasibility Study and Proposed Plan for Remediation of the 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2, and 100-IU-6 Operable Units, Draft A*

*Issue Manger introduction*

---

\* Please see Attachment 1 – Transcribed Flip Chart Notes for key points/follow up actions recorded during the committee discussion.

Dale said that the committee was initially working on one piece of advice that would address both the RI/FS and PP, plus issues related to long-term stewardship and land transition. The committee has since separated these into two pieces of draft advice. The long-term stewardship/land transition advice will be addressed separately and secondly.

As IM for the RI/FS and PP draft advice, Dale introduced this document (Attachment 3). Surface remediation in the 100-F was determined to be complete some time ago. The draft advice focuses on the F Area operable units. It does not address 100-IU-2 and 100-IU-6.

#### *Agency perspectives*

Greg Stinton, DOE-RL, said many of the issues in the advice were discussed during previous RAP meetings. He pointed out a specific concern about the number quoted in the fifth advice point: that number should be  $1 \times 10^{-4}$  instead of  $1 \times 10^{-3}$ . He noted that the change would not impact the draft advice.

Emy Laija, EPA, said the Board should be clear about their expectations with this advice. The agencies may thank the Board for their advice but not agree with the specific points. She also noted that some of the advice points are longer than typical Board advice points which can be more difficult to respond to, although EPA does feel these points are clearly written.

#### *Committee discussion*

*Note: This section reflects individual questions, comments, and agency responses, as well as a synthesis where there were similar questions or comments. Questions, comments, and responses were provided by HAB members unless noted otherwise.*

C. The intent of each advice point was to state the action that the Board would like DOE to take in the first sentence and then provide information to back up that statement. The Board does not expect the agencies to respond to every sentence within the advice points.

C. There was a question about consistency of the advice in referencing cleanup to CERCLA standards and then mentioning cleanup to unrestricted use along the River Corridor in the final advice point. There are other cleanup standards that should also be added, such as standards under the Model Toxic Control Act (MTCA) which require remedies to the extent practicable and does not include Institutional Controls (ICs) or MNA. MTCA requires cleanup to meet a health risk standard for the most sensitive or highly exposed population. The most sensitive population is children of Native Americans and others that live on the site with unrestricted use. The cleanup exposure scenario should be protective of Native Americans that use their treaty rights to live along and fish in the river.

RAP discussed wording changes to the last advice bullet and debated footnoting the note at the end of the advice point.

C. The advice point should read that the Board would like DOE to clean up to unrestricted use standards along the River Corridor as stated in the PP. DOE appears to be considering less stringent cleanup standards based on their land use plan, which is what the note in the advice point was referencing. The Board believes every effort should be made to meet the cleanup standard of  $10 \times 10^{-6}$  excess lifetime cancer risk (ELCR). RAP decided to leave the note, while keeping the reference to  $1 \times 10^{-3}$  as written, in the advice point with a footnoted reference to the source document.

C. [EPA] The Board is advising two different paths by saying DOE should clean the Hanford Site to unrestricted use and then later saying DOE should use MTCA standards for cleanup. Native American land use and unrestricted land use have different exposure scenarios.

RAP agreed to move forward with the advice as edited. It will be sent to the entire committee over email for final review before going forward to the Board at the June meeting.

*Draft Advice re: Hanford Long-Term Stewardship Program*

*Issue Manger introduction*

On behalf of Bob Suyama, IM, Dale next introduced the draft advice on the Long-Term Stewardship (LTS) Program at the Hanford Site (Attachment 4). He said RAP received a good presentation from LTS program staff about their plans to move 100-F Area into LTS, which would be the first reactor site to go into the program. The basis of the draft advice is that the Board does not agree with DOE's choice to move 100-F into LTS, especially if DOE will only be using MNA and ICs until the area is considered fully remediated. The Board would like DOE to take more protective measures to treat the groundwater and contaminant plumes. The end goal should be to restore the groundwater to the highest beneficial use.

*Committee discussion*

*Note: This section reflects individual questions, comments, and agency responses, as well as a synthesis where there were similar questions or comments. Questions, comments, and responses were provided by HAB members unless noted otherwise.*

C. The basis of the advice is that the Board believes it is premature to transfer any area of the Hanford Site into LTS until cleanup is complete in that area. The Board does understand the transfer is only from one department within DOE to another, but still does not believe the transfer is appropriate. However, the Board would also like to recommend that if DOE does decide to continue with the land transfer, there should be maintenance and surveillance processes in place. The second advice point advises DOE to consider an interim LTS process instead of full transition to the LTS program when additional cleanup work still needs to be completed.

C. The Board has been disappointed with the CERCLA Five-Year Review Program. Reviews appear to be very casual without a lot of thoroughness or detail. The reviews are not always a useful way to determine protectiveness of remedies. DOE is only using MNA for contaminants under the reactor at least until the reactor is removed, which could be 75 years in the future.

Q. What is DOE's motivation for moving lands into LTS?

*R. [MSA] The primary reason to transition land into LTS is to have someone manage the land once the cleanup contractor finishes their requirements under an interim ROD. The LTS program is part of the management process to put land into an interim state between when the cleanup contractor completes their obligations and when Legacy Management (LM) takes responsibility for lands sometime around 2060.*

RAP members discussed whether there is specific language in the ROD about removing the reactors or if there are other options to remediate the reactors without full removal. Some committee members thought there was specific language in the ROD stating that reactors should be removed. Others thought the ROD stated a preference to remove the reactors in 75 years when they are cool enough but that a final decision has not been made. The committee ultimately decided there was a decision to remove the reactors and will reflect that in the advice.

C. The transition to LTS should not happen until the reactors are gone, groundwater remediation has been completed and all other cleanup work is complete.

*R. [MSA] There is a DOE-RL LTS Program and a LM LTS program. The DOE-RL LTS Program is an interim surveillance and maintenance program until the LM comes on-site. MSA understands their role as interim managers and that waste sites will not be closed until after the ROD is finalized. The RODs establish what work needs to occur at each site. Washington Closure –Hanford (WCH) has been under contract to clean sites to interim ROD standards. There may still be some additional cleanup required under the final RODs but until those decisions are made, DOE needs someone to manage the areas and has hired MSA for that purpose. The program name was initially something along the lines of “Interim Maintenance Care and Surveillance” but was then changed to LTS. The name of the program could be changed to reflect the interim status. Groundwater is not included in the DOE-RL LTS Program.*

C. The Board is concerned that transitioning lands to LTS will give the public and Congress the appearance that cleanup in that area is finished when DOE knows there is still work that must be completed. Giving Congress this perception could lead to funding issues. The Board could advise DOE to rename the program so it is more reflective of the interim status of these cleanup areas.

C. The problem, aside from the name of the program, is how MSA will contract with other contractors to continue remediation.

*R. [MSA] There are provisions within the MSA contract for some remediation work and both MSA and DOE understand that further cleanup will be required in 100-F Area.*

C. The maintenance and surveillance activities on an area will be reduced when it is moved from active remediation into LTS. Basic monitoring will just ensure that nothing dramatic is occurring with larger monitoring during Five-Year Reviews that will determine whether the remediation continues to be protective.

C. The Board is concerned that this LTS transition does not include any public involvement process. DOE came to the Board and told them the plan without giving the public an opportunity to voice concerns.

RAP decided to remove the second advice point and offer one point of advice stating that they believe DOE's transition of land into LTS before completing all remediation actions is premature.

RAP agreed to move forward with the advice as edited. It will be sent to the entire committee over email for final review before going forward to the Board at the June meeting.

### **Impacts from the Tank Closure and Waste Management Environmental Impact Statement Modeling on Future Cleanup\***

#### *Introduction*

Dale, IM for the Tank Closure and Waste Management (TC&WM) Environmental Impact Statement (EIS), said the Board offered advice on the TC&WM EIS when it was first issued and there was some consternation by RAP members that not all of the advice was heeded. RAP would like to have a better understanding of the modeling process that was used and how that process will be used in the future. Dale wrote a white paper with the help of the other IMs that describes the groundwater modeling process. He said the conversation today would focus on how the modeling will be used in the future (Attachment 5). Dale noted the following points in his presentation:

- The EIS groundwater model design used the most up to date inventory and was only intended to compare remediation alternatives; it was not designed to consider protective alternatives.
- Alternatives differ in multiple ways and issues were grouped, making direct comparison difficult.
- The EIS model indicated that there is a large inventory of contaminated water from leaks, releases and disposals that present a high risk from Single-Shell Tanks (SSTs). Importation of off-site waste would exceed the Hanford Site's waste capability.
- The preferred alternative in the EIS is to retrieve 99% of the tank waste. Some tank waste can be classified as transuranic waste (TRU) for shipment to the Waste Isolation Pilot Plant (WIPP). A preferred alternative for supplemental waste treatment will be chosen later.
- There are a number of implications from the preferred alternative; including that vadose zone contaminants below the tanks might not be addressed, and there would be less waste to vitrify if TRU waste is sent to WIPP.

#### *Agency perspectives*

---

\* Please see Attachment 1 – Transcribed Flip Chart Notes for key points/follow up actions recorded during the committee discussion.

Mary Beth Burnandt, DOE-ORP, reiterated Dale's point about the EIS containing a lot of information on each of the alternatives that can be used for decision-making. There are many ways to consider the data and it can be time consuming to consider specific elements.

Dib Goswami, Ecology, said he looks forward to further discussions on the EIS Model that address some of the other questions noted on the meeting agenda.

#### *Committee discussion*

*Note: This section reflects individual questions, comments, and agency responses, as well as a synthesis where there were similar questions or comments. Questions, comments, and responses were provided by HAB members unless noted otherwise.*

Q. Can DOE address the analysis used in developing the composite cases in the EIS? A number of models were used so it seems like there should be a dataset of information that could be used to analyze some very complex questions. It would be interesting to compare the alternatives and determine whether the preferred alternative should really be preferred.

*R. [DOE] One comment DOE is addressing is the sensitivity analysis. There are questions on specific elements of the alternatives presented. The final addendum of the report includes more detail on a narrower scope of issues that would be important to note since these issues are driving results. DOE tried to identify assumptions that have major influences on the result.*

C. It is not easy to compare alternatives against each other because each alternative contains a number of elements that are different from the other alternatives.

C. RAP should return to this modeling topic during a future meeting and address more of the questions on the agenda. The groundwater issues are especially important. One additional consideration is the TRU tanks and the benefits of moving some waste to WIPP versus the distraction of the political process required to reclassify waste as TRU. This is an issue that should be addressed by the Tank Waste Committee.

The committee requested copies of Dale's presentation. Susan said she will email it to the committee and the presentation will also be posted to the SharePoint site by the end of the week.

#### **Committee Business**\*

---

\* Please see Attachment 1 – Transcribed Flip Chart Notes for key points/follow up actions recorded during the committee discussion.

Susan reviewed the follow up items, which include providing the three pieces of advice discussed to the entire committee for final consensus via email. She then reviewed the Three Month Work Plan (Attachment 6) and noted there will not be enough time to fully revise the plan. One item that will likely be added to a June meeting or committee call is the 2014 HAB work plan. RAP will hold a call on Tuesday, May 14 at 1:30 p.m. to further discuss the work plan and begin to develop the June meeting topics table.

**Attachments**

Attachment 1: Transcribed Flip Chart Notes

Attachment 2: Draft Advice re: Draft 300 Area Remediation Investigation and Feasibility Study and Proposed Plan

Attachment 3: Draft Advice re: Remedial Investigation/Feasibility Study and Proposed Plan for Remediation of the 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2, and 100-IU-6 Operable Units, Draft A

Attachment 4: Draft Advice re: Hanford Long-Term Stewardship Program

Attachment 5: Dale Engstrom’s presentation on the Tank Closure & Waste Management Environmental Impact Statement Groundwater Model Impacts

Attachment 6: Three Month Work Plan

**Attendees**

HAB Members and Alternates

Richard Bloom	Steve Hudson	Wade Riggsbee (phone)
Tom Carpenter (phone)	Pam Larsen	Dan Serres (phone)
Shelley Cimon	Susan Leckband	Dick Smith
Dale Engstrom	Liz Mattson	John Stanfill (phone)
Gary Garnant	Gerry Pollet	Jean Vanni
John Howieson (phone)	Ed Revell, TRIDEC	Steve White

Others

Mary Beth Burandt, DOE-ORP	Dieter Bohrmann, Ecology	Ron Brunke, CHPRC
Kim Ballinger, DOE-RL	Dib Goswami, Ecology	Maren Disney, CHPRC
Greg Sinton, DOE-RL	Emy Laija, EPA	Bruce Ford, CHPRC
K. Michael Thompson, DOE-RL		Joy Shoemake, CHPRC (phone)
		Alex Nazarali, CTUIR
		Nicole Addington, EnviroIssues

		Susan Hayman, EnviroIssues
		Sharon Braswell, MSA
		Michael Turner, MSA
		Bill Jessernig, Public
		Tom Rogers, W-DOH