FINAL MEETING SUMMARY

HANFORD ADVISORY BOARD

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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

The River and Plateau Committee (RAP) and the Public Involvement and Communications Committee (PIC) met together to focus on joint issues. Pam Larsen, RAP chair, said RAP will be working towards advice on the Tri-Party Agreement (TPA) change packages. She said the issues raised in this meeting will be emailed out to Hanford Advisory Board (HAB or Board) committees to try to get advice ready for the June Board meeting.

Steve Hudson, PIC chair, noted that many PIC members will not be at the June Board meeting.

Norma Jean Germond said she has been working on an informal Board meeting with the potential presence of contractors, which has been done in the past. Steve said the idea is to attract new people to the HAB.

Advice Development

TPA Change Package issues identified at the conclusion of the morning Committee of the Whole meeting for advice development.

- 1. How the public views Department of Energy (DOE) preparing Record of Decision (RODs) for Environmental Protection Agency (EPA) signature (Executive Order 12580).
- 2030 Waste Isolation Pilot Plant (WIPP) closure/2035 ship date; 2016/2018 Design & Construct; Sequence
- 3. Delay in remote handled (RH) capability
- 4. Milestone needed for treatment for interim storage prior to shipping to WIPP
- 5. Milestone for construction start of RH transuranic (TRU) storage/treatment facility
- 6. Pushing date for deep vadose out over time for development of technology (not taking time to capture other options)
- 7. Would like to see more focus on TRU waste disposed of prior to 1970 ("pre-70 TRU") (take it out of Hanford)
- 8. Treatment of pipelines lack of definition of milestones (table this until Wade Riggsbee investigates)
- 9. Adequate range of options investigated before approving RODs (include with #1)
- 10. TPA clarification Clear chart organizing operable units into geographical units (map?)
- 11. TPA clarification Name groundwater operable units into "200 East" and "200 West"
- 12. 2024 for treatment and completion of all non-tank operable units (*put in background*)
- 13. Use of "unenforceable" target dates for M-91
- 14. Alternative for treatment ensuring private capacity/capability (single facility versus many facilities) include language in TPA.
- 15. What does "facility" mean?

Liz Mattson asked for more clarification on the above change package issues 6, 7, 12, 14 and 15.

Dale Engstrom clarified that issue 15 refers to confusion about the definition of "facility" in the change package. Gerry Pollett said a third definition to the word "facility" would be confusing.

Dale said regarding issue 1 on the preparation of Record of Decisions (RODs), he is comforted that all the agencies are still able to review the RODs. Gerry said the remedy is selected in the feasibility study before the ROD is drafted and decision making should not be delegated to other agencies. He said the decision maker has to show how the decision was evaluated. For example, DOE cannot document how the EPA came to a decision. He thought it was unlawful to delegate RODs. He recited section 120 in the executive order and said EPA is required to provide basis for its decisions. He said DOE should not

decide what EPA considers. Emy Laija, EPA, said EPA has not given up authority. She said communicating more clearly might be an issue with producing a ROD, but EPA thinks the authority is in approving the document – not drafting it.

Emmett Moore, Washington State University, said whomever signs the document is responsible and it should not matter who wrote it.

Gerry added that the ROD will not be available for public comment. Paula Call, DOE-Richland Operations Office (RL), said public involvement for the ROD will be much more transparent than it has been in the past.

Gerry said the committees do not have consensus regarding the ROD drafting issue. He said Heart of America Northwest will be drafting a legal review of the ROD process. He said there have not been responses to public comment on legal arguments. Paula said that the TPA agencies did respond to the public comments on the ROD process. Gerry said the TPA agencies did not address the legal concerns. Paula said there was a response, and the TPA agencies disagreed with the comments. Gerry said he would like to have the agencies make the draft ROD publicly available. Barb Wise, Mission Support Alliance (MSA), said documents are posted online and draft RODs could be added.

Emmett asked if the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) process is considered equal to the Environmental Impact Statement (EIS) process. Gerry said the two are not equivalent. There are differences with cumulative impacts, for example.

The committees discussed TPA change package potential issue 2: "2030 Waste Isolation Pilot Plant (WIPP) closure/2035 ship date; 2016/2018 Design & Construct; Sequence"

Dale said the HAB can write advice to encourage the use of the 2030 date for waste being shipped to WIPP. He added that issues 2, 3, 5 and 7 are related and can be incorporated when the advice is written.

Pam said there should be a change in the New Mexico permit before accepting the 2035 shipment date in writing. Gerry said the chances are low that the New Mexico permit will change.

Laura Hanses said she is not sure why moving the date for shipment to WIPP is important when removal of TRU waste should be done as soon as possible. Gerry said the shipment dates should reflect the closure date for WIPP. Paula asked if shipping TRU waste should be more important than the removal of other waste.

Harold Heacock said there should not be a back log created for pre-1970 TRU.

Ken Gasper said DOE should avoid shipping waste during winter months. Gerry said DOE should keep safety concerns in mind when shipping waste.

Liz asked about the focus on pre-1970 TRU waste. Dale explained that the issue is suggesting the removal of all pre-1970 TRU waste. Susan Leckband thought pre-1970 TRU waste should have its own milestone. She said there should be more characterization, retrieval and disposal of pre-1970 TRU waste. Gerry said if there is not

a milestone now, the capacity of WIPP might not be able to handle the volume of the pre-1970 waste.

The committees discussed TPA change package potential issue 6: "Pushing date for deep vadose out over time for development of technology (not taking time to capture other options)"

Wade Riggsbee said issue 6 has to do with the new TPA milestone for the deep vadose zone and treatability of technetium and uranium. He said integration of the deep vadose zone problems, such as tank leaks, are not included. There should also be more focus on schedule and technologies. Harold added that risk needs to be considered.

Maynard said groundwater and tank milestones should be more comprehensive and integrated. He said the Tank Closure and Waste Management EIS (TC&WM EIS) has shown that there could be problems later in the process if not addressed at the beginning. Emy said going into detail might be a little preemptive; the test plan and work plan are not out yet for the deep vadose zone work. Maynard asked if there is any advice on what should be in the test plan for the deep vadose zone work. Dale said the Board is not advising DOE on the deep vadose zone issues at this point, but encourages the investigation of more technologies.

Wade asked if the work plan will identify potential technologies for the deep vadose zone. Emy asked for clarification –Board members want more time taken to investigate technologies, but still want to go ahead with cleanup? Dale said yes.

Susan presented a sample text for creating an advice bullet from issue 6: "The HAB appreciates the focus on the deep vadose zone and the accompanying milestones. We look forward to working with the agencies on the upcoming test plans and the feasibility study. We encourage the evaluation of a broad range of technologies for deep vadose zone remediation and adjusting the schedule as newer, better technologies are implemented."

The committees discussed TPA change package potential issue 8: "Treatment of pipelines – lack of definition of milestones"

Wade said he is exploring issue 8 regarding the treatment of pipelines. He said it sounds like the concerns are being addressed.

The committees discussed TPA change package potential issue 10: "TPA clarification – Clear chart organizing operable units into geographical units (map?)"

There was consensus that issue 10 regarding a chart or map organizing operable units should be covered in the advice.

The committees discussed TPA change package potential issue 12: "2024 for treatment and completion of all non-tank operable units"

Gerry addressed issue 12 related to the completion of all non-tank operable units and said the 2024 milestone is not going to change. He said the operable units for TRU waste have

been subject to the 2024 deadline and treatment and disposal is always a part of the ROD for cleanup. He said waste sites has been moved from 2024 to 2035, but the 2024 milestone for completion of non-tank operable units remains important for central plateau. He said he wants to make sure that a 2030 milestone is not applied to all non-tank operable units.

The committees discussed TPA change package potential issue 13: "Use of "unenforceable" target dates for M-91"

Gerry said issue 13 is in reference to the use of unenforceable target dates which was included in the April HAB advice. He said the advice stated the difficulties associated with getting funding without enforceable milestones. He said the schedule should be enforceable and past advice could be referenced.

The committees discussed TPA change package potential issue 14: "Alternative for treatment – ensuring private capacity/capability (single facility versus many facilities) – include language in TPA"

Gerry said there should be a sentence in the advice addressing the M-91 milestone for treatment capacity for issue 14, regarding treatment alternatives. He said this section of the milestone should be revised to clearly reflect that treatment capability can be attained on site or off site.

The committees discussed TPA change package potential issue 15: "What does "facility" mean?"

Gerry said issue 15 refers to creating another definition of "facility" in the TPA. Paula suggested putting this with the clarity portion of the advice.

Pam said it is important to acknowledge the positive aspects of the change packages in the advice as well. She said the change package reflects comprehensible geographic approach, addresses the deep vadose zone, increases the number of central plateau decision and integrates the cleanup of soils, facility, and groundwater. Susan said that the early involvement and frequent updates were appreciated by the HAB as well.

Susan Hayman, Envirolssues, asked for volunteers to write the advice points.

Dale volunteered to draft the advice point on TRU waste.

Gerry said he would draft the advice point for M-91 and the advice point addressing clarity.

Susan Leckband said she would write the ROD advice point.

Wade said he would write the pre-70 TRU and deep vadose zone advice points.

Pam said she would draft the section acknowledging the positive parts of the change package, to be included in the background. Dale said he would work on the rest of the background and compile the advice points.

There was consensus that the drafts are due to Dale by Monday morning, May 17, and will be distributed to the committee by May 20. Comments are to be back to Susan Hayman by Monday, May 24, with the final draft for committee consensus on May 26.

Non-Radioactive Dangerous Waste Landfill (NRDWL) and Related Closure Plans

Wade said Kevin Leary, DOE-RL, will be providing the draft Environmental Assessment (EA) for the Non-Radioactive Dangerous Waste Landfill (NRDWL).

Kevin said there will be a public announcement of the NRDWL EA. Paula said the public involvement period starts May 13 along with an advertisement in the paper.

Kevin said the EA is for the Solid Waste Landfill (SWL) and NRDWL, and DOE has been working hard on the closure plans for this fast-paced project. He said DOE is working on finishing the final draft of the EA. There have been workshops and a separate groundwater plan. Moreover, many additional materials have been generated because this is the first closure plan for a burial ground. As a part of the review process there will also be 5 new wells. He said the EA review will be held against the State Environmental Policy Act (SEPA) check list.

Kevin said the information collected from the lycimeter facility simulations have assisted in the design of the NRDWL cover.

Regulator perspective

Deborah Singleton, Washington State Department of Ecology (Ecology), said this
project has been fast-paced. It was interesting to look at the lysimeter and use results
to make the correct decision. She said Ecology felt that since this is the first closure,
the dangerous waste regulations should be used. She said Ecology looked at the
corrective action data to help their decision and feels very comfortable with the
decisions being made.

Committee Discussion

- Pam asked if the sewage effluent is dry. Kevin said it was liquid.
- Pam asked if there is a trench in the landfill and what the groundwater testing is showing. Kevin said the more stringent regulations include more groundwater monitoring, a thicker cover and more wells. He said operational covers are not engineered barriers and the soil in the area is very sandy.
- Gerry said he is not sure if the document follows SEPA requirements. Deborah said Ecology has not accepted the EA document. She said this is the first time Ecology has seen the EA.

- Gerry said the EA does not describe the groundwater issues. Kevin said the EA directs people to the closure plan.
- Gerry asked if there was an analysis of exposure to hazardous constituents present in the EA. Kevin said hazardous constituents are addressed in the closure plan. Gerry said this information should be in the EA.
- Keith said he is not sold on using barriers and asked how much confidence there is in the longevity of a cap. Kevin said the best DOE can do is use the natural analogues to see how the soil will perform long term. He said the biggest failures from other sites associated with caps have assisted in evolutionary changes. He said with natural analogues and modeling he is confident in caps.
- Keith asked if there has been characterization for what materials are under the sites. Kevin said the contamination has gotten to the groundwater.
- Floyd Hodges said the wash water impacts with a cap may be underestimated. He added that what is in the waste site is not completely shown in the EA.
- Maynard asked about the monitoring wells. Kevin said DOE will review the
 monitoring wells in five years and hope that the trends in contaminants will decrease.
 He said the sooner a cap is installed the better. Maynard asked if DOE knows the rate
 of decreasing contamination from the wells data. Kevin said contamination has
 declined more in some contaminants and DOE will continue to monitor.
- Maynard asked if the barrier is going to be permanent. Kevin said once the barrier is
 in, it will perform well. He said eventually DOE will monitor remotely via satellite.
 He said the barrier should last hundreds or even thousands of years.
- Pam said she is not sure if there will be advice by the June Board meeting.
- Wade asked if there will be deep monitoring wells. Kevin said DOE will do shallow monitoring wells and go deeper if needed.
- Wade asked if the 200 East Area lysimeter report has been reviewed. Kevin said it would be good to get that data.
- Gerry said he has public involvement concerns with the EA notice. Paula said it is not a notice, it is a fact sheet. Gerry said it would be meaningful to show the contamination levels and the effects to humans. Paula said the fact sheet will not include all the information in the EA.
- Gerry said the EA should show projected impacts. He said public values should be
 included. Kevin said all the issues mentioned are addressed in the closure plan. Gerry
 said the purpose of an EA is to assess whether the action has an impact on the
 environment.

- Asopuru Okemgbo, Ecology, reiterated that Ecology only received the EA today. He said Ecology has not commented on the EA yet. Deborah said Ecology is not going to adopt the EA until it has gone through the SEPA check list. Gerry said he would like to make sure there is a review period. Madeleine Brown, Ecology, said Ecology will meet SEPA requirements.
- Floyd said there is not information in the EA addressing the types of waste associated with the unlined trenches. Floyd thought DOE was putting a lot of faith put in the barrier. Kevin said the liner is temporary and only for the operational period. He said once the barrier is put on it should operate well. He said DOE will install the cap and make adjustments if it does not perform well.
- Keith asked if there is a plan if the barrier fails. Kevin said yes, DOE will do
 whatever needs to be done. He said the biggest potential failure is the possibility of
 subsidence.
- Pam said she does not think it is possible to have advice on the EA by June. She suggested an issue managers meeting to discuss concerns.
- The committees agreed that the issue managers will be Wade, Floyd and Dale.
- Liz said PIC will discuss the public involvement process.
- Kevin said the EA is available online.

100-N Work Plan Update

Mike Thompson, DOE-RL, said the agencies are working toward a proposed plan for the 100-N Area. The effort includes public involvement planning. He said DOE is working to meet the milestones.

Mike said DOE just submitted a treatability test for apatite. He said there is an integrated groundwater monitoring plan coming out next week in support of the Remedial Investigation and Feasibility Study. DOE is considering amending groundwater plans. Mike said there is groundwater and aquifer sampling associated with the work plan going on during the high water period this summer. Ecology submitted comments on DOE's draft A of the work plan. Draft B was completed with the major difference being the explanation of the characterization work done in the 1990's. He said DOE installed aquifer tubes in response to upwelling and is pursuing a phito extraction test in draft B. He said most of the environmental section has been added to the work plan as well.

Regulator perspective

Alicia Boyd, Ecology, said she is the 100-N lead for Ecology. The issue managers
have brought up things that Ecology brought up in the first round of the work plan.

Ecology is now reviewing the current draft of the work plan to investigate if more monitoring is needed.

Committee Discussion

- Dale said Shelley Cimon was pursuing issues with the 100-N Area and there have been discussions on crafting advice. He said the strontium plume is a problem, near the apatite barrier. He said he is not sure that there has been enough characterization. He said there is an unremediated source of strontium and potentially more than one source of chromium. Mike said DOE will have more characterization data. Dale added that groundwater monitoring has been discontinuous, and there are a lot of uncertainties that should be addressed.
- Pam suggested drafting advice and talking with Alicia and Mike.
- Wade said he is concerned about the known diesel contamination. Mike said there is an expanded discussion on diesel in the current iteration.
- Pam suggested that Alicia reference previous HAB advice.
- Mike said DOE is always ready for advice, and this is not the only opportunity to give advice on the 100-N Area.

Action Items / Commitments

- Authors provide drafts of TPA change package advice bullet points to Dale by Monday morning, May 17.
- Susan H. distributes draft TPA change package advice to the RAP/PIC committees by Thursday morning, May 20.
- Committee members provide comments on TPA change package advice back to Susan H. by Monday close-of-business, May 24.
- Susan H. emails final draft TPA change package advice for committee member concurrence by Wednesday, May 26.
- Committee members will have until Friday, May 28 to email Susan and register any disagreement with bringing the TPA change package advice forward at the June Board meeting.
- PIC will discuss public involvement approach for NRDWL & SWL on May 20 committee call.
- Issue managers (Wade, Dale, Floyd) will meet together to identify specific concerns for NRDWL & SWL, and then meet with DOE and Ecology to discuss these concerns.

- No HAB advice is contemplated for NRDWL & SWL; input will be provided to DOE and Ecology through issue managers.
- Dale and Shelley will review draft B of the 100 N work plan and prepare draft advice points.
- Dale and Shelley will meet with Mike and Alicia to review draft advice points for 100 N work plan and discuss concerns.
- If Dale and Shelley think 100 N advice is needed in June, they will need to work with Susan H. to get on the same advice development schedule being used for the TPA change package advice.

Handouts

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

• Interim Action Environmental Assessment for closure of two Hanford Central Plateau landfills: Fact Sheet, DOE.

Attendees

HAB Members and Alternates

| Sam Dechter | Steve Hudson | Maynard Plahuta |
|--------------------|----------------|-----------------|
| Dale Engstrom | Floyd Hodges | Gerry Pollet |
| Norma Jean Germond | Pam Larsen | Wade Riggsbee |
| Laura Hanses | Susan Leckband | Keith Smith |
| Harold Heacock | Liz Mattson | |
| | | |

Others

| Paula Call, DOE-RL | Rick Bond, Ecology | Janice Williams, WHPRC |
|------------------------|--------------------------|----------------------------|
| Michael Thompson, DOE- | Dieter Bohrmann, Ecology | Susan Hayman, EnviroIssues |
| RL | | |
| | Alicia Boyd, Ecology | Blair Scott, EnviroIssues |
| | Madeleine Brown, | Michele Gerber, WRPS |
| | Ecology | |
| | Asopuru Okemgbo, | Emmett Moore, WSU |
| | Ecology | |
| | Deborah Singleton, | |
| | Ecology | |
| | Ginger Wireman, Ecology | |
| | Emy Laija, EPA | |