

FINAL MEETING SUMMARY
HANFORD ADVISORY BOARD
BUDGETS AND CONTRACTS COMMITTEE
October 5, 2011

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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

Gerry Pollet, Heart of America Northwest and Budgets and Contracts Committee (BCC) chair, welcomed everyone to the meeting and led a round of introductions. Gerry reviewed the purpose of the meeting.

The committee adopted the September meeting summary.

2011 Hanford Lifecycle Scope, Schedule and Cost Report

Issue manager introduction

Harold Heacock, TRIDEC and BCC vice-chair, said the 2011 Hanford Lifecycle Scope, Schedule, and Cost Report (Lifecycle Report) reports that it will cost \$115 billion to cleanup Hanford through 2060, with long-term stewardship through 2090. Harold said the bulk of the \$115 billion will be spent primarily within the next 20 years. Harold said the Lifecycle Report is well done and takes a high level approach to most issues. He noted that most issues, however, are based on DOE assumptions, rather than regulator or public input. Harold said he has questions about closure dates, end states, and other issues that are not addressed by the Tri-Party

Agreement (TPA). He said he would like to see the committee bring advice before the November Hanford Advisory Board (HAB or Board) meeting; to do so, the committee will have to address only high level issues.

Agency briefing

Shannon Ortiz, U.S. Department of Energy (DOE) Richland Operations Office (DOE-RL), provided a presentation on the Solid Waste-2 (SW-2) Burial Grounds, first noting that the alternatives analysis was conducted at the request of the regulators for the Lifecycle Report. This is the first of 39 areas that do not yet have final decisions associated with them.

Shannon reviewed the timeline of the SW2 alternatives analysis relative to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) process, beginning with the Lifecycle Report Workshop in July 2010. The Remedial Investigation/Feasibility Study (RI/FS), proposed Correction Action Plan (CAP), and proposed decision are due to Ecology with 2016, with formal review and plan implementation extending through 2024.

Shannon said there are 25 SW sites within the 200 Area SW-2 Operating Unit, covering 680 acres. She said the waste sites have been categorized into six bins based on similar characteristics, and the bins will be used throughout the scope. Shannon reviewed the estimate development method used on the bins, noting:

- The burial ground contents were divided into waste groups for which there is historic basis for waste handling and/or processing.
- The groups were estimated using historic costs or current estimates.
- An upper bound estimate was developed for waste groups identified as having no easily identifiable handling or processing methods.
- No specific process was designated for all of the waste, but general engineering processes were identified.
- The six bins were simplified into three groups.

Shannon reviewed material and volume for each group, noting that Group 1 contains the most waste and most of it will likely be sent to the Environmental Restoration and Disposal Facility (ERDF). Group 2 contains transuranic (TRU) waste that may be sent to the Waste Isolation Pilot Plant (WIPP), and Group 3 contains high dose waste that may also be sent to ERDF. She reviewed charts depicting cost and volume of the three groups, noting that while Group 1 encompasses the most waste, Group 3 will cost the most to retrieve and dispose of. She also reviewed the project costs for each bin and associated costs.

For easy reference, Shannon compared the volume of the waste in each group to a recognizable size. Waste from Group 1 would fill five ERDF super-cells or five Empire State Buildings. Waste from Group 2 would fill two WIPP panels or one football field if the waste was stacked 16 feet high. Waste from Group 3 would occupy two Hanford Canyon buildings or fill a supertanker ship.

Shannon reviewed the project magnitude for the SW-2 Burial Grounds, noting that the Lifecycle Report alternative estimate ranges from \$11.1 to \$16.6 billion over 10 years. This estimation is based on experience from across the DOE-Environmental Management (DOE-EM) complex. Shannon said the information provided in the Lifecycle Report should be consistent with burial ground information provided in other documents, and System Plan Revisions 4 and 6 were referred to for consistency. She said the committee should look to Appendix F of the Lifecycle Report for more detail on the SW-2 volume, estimation methods, and analysis.

Regulator's perspective

John Price, Washington State Department of Ecology (Ecology), said the origin of the Lifecycle Report was the result of a lawsuit between Ecology and DOE. Ecology completed their own Lifecycle Report five to six years ago when it became obvious that DOE would be missing a number of TPA milestones. John said Ecology's report determined approximately 100 years and the same general cost for cleanup. He said Ecology found the report to be very useful, and he hopes DOE's version will be too. John said one of DOE's biggest challenges is trying to find cost saving measures for cleanup without sacrificing the environment, public, and worker safety. He referenced Figure 3.3 of the Lifecycle Report that shows cleanup costs by year, noting that DOE will need additional American Recovery and Reinvestment Act (ARRA) funding before 2020 to keep the timeframe as it is. Without the extra ARRA funding, the cleanup timeframe will be extended. John spoke to Shannon's slide 10 that depicted the three waste groups and what can be done with the associated wastes, noting that the diagram will be helpful for all kinds of future communications on the SW-2 Burial Grounds. John said slide 12 will be helpful to demonstrate WIPP probably has plenty of capacity for burial ground waste, and it will be helpful in discussions about cleanup alternatives. He said Ecology would find advice helpful that addresses moving as much plutonium off site and to WIPP as possible. He also suggested the advice recommend refinement of burial ground values in order to understand how much waste is possible. He said the committee will have to decide whether or not the upper bounds of some decision points are reasonable.

Committee discussion

- Harold asked if DOE had to make a lot of assumptions on end states and regulatory compliance. Shannon confirmed that they did, noting that different possible end states and radiation levels for each of the 39 decision points is provided in the appendixes to the Lifecycle Report.
- Dirk Dunning, Oregon DOE, asked if DOE has an understanding of what kind of waste is in Group 3. Doug Hildebrand, DOE-RL, said the waste is mostly cesium strontium. Dirk spoke to decisions made for the hot cells that resulted in cesium being vented from graphite filters as 10,000 curies of cesium was sent for disposal. He said that curie a month would be encased in 17 tons of lead, lowering the dose rate because of shielding but subsequently causes a lead problem. Doug said that lead used for shielding is not treated as hazardous waste because it is part of a waste package. He said the issue Dirk

spoke of was done remotely, using trains to drag the packages into the ground with cranes to fill in the backfill. He said workers received exposure doses just for completing that work. Doug said the high dose waste should remain underground for another two half lives before it should be dealt with, in order to reduce the dose rate. Dirk suggested that the stack exhausts used in the Hanford canyons be removed because they too feature thousands of curies of cesium.

- Laura asked if 2024 is a significant date for the SW-2 burial grounds, as it was used in Shannon's timeline review. Shannon said 2024 was just used as an example end time frame with no particular meaning. John said 2024 is a major milestone for Central Plateau remediation. Laura asked if characterization is included in the timeframe. Shannon said characterization is addressed in Appendix F and features similar estimates. She said it is within current planning assumptions because characterization is ongoing. Doug said that in the current work plan, the cost estimate for characterization over two and a half years will be near \$14 million, including some intrusive work. Gerry noted that \$14 million doesn't seem like enough to complete much characterization. Doug said the cost includes some horizontal drilling and six to twelve intrusive areas.
- Maynard Plahuta, Benton County, asked how many half lives have already passed for solid waste. Doug said at least one half life; some waste has been in place for two half lives. He said the estimated volume is based on what remains after some of the waste has decayed; the information is provided in Appendix F. Maynard said the graphs projecting project costs are confusing because some costs include maintenance and others do not. He suggested updating the graphs to be more consistent. He stated a specific interest in getting an explanation to why there was a difference between slide 8 and Appendix F.
- Bob Suyama, Public-at-Large and Board vice-chair, said the SW-2 Burial Grounds is just one of 39 areas to address, and the Lifecycle Report assumes unlimited funding. Shannon said the Lifecycle Report shows constrained and unconstrained funding. Bob said that given the current and future budget constraints, it seems that all activities will have to move out on the timeline. He said the basic end date of 2090 may be even further out. He asked if WIPP will be available in the 20-30 year time frame that is needed to go through another waste half life. Larry Romine, DOE-RL, said WIPP is based on capacity and its permit is updated every five to ten years with an additional planning horizon. He said based on what is being sent to WIPP today, short of CERCLA decisions, DOE thinks there will be space available. John said it is unlikely that DOE will shut WIPP down in 2020 and reopen it at a much later date. He said anything to be shipped to WIPP should be excavated now in order to make WIPP's timeframe, which will push other projects out. Gerry said that currently, WIPP is scheduled to close in 2030. He said it is one thing to say that WIPP will be a possibility in the future, but it is entirely different to depend on it being available.
- Gerry asked if the range of the cost for the burial grounds, roughly \$680 to \$820 million, is included in the base cleanup cost of \$115 billion. Shannon said it is not. Gerry said

\$115 billion does not include work that the Board has advised to be done. Gerry spoke to confusion over the characterization plan, noting that a line item in Appendix F shows an in-depth retrieval program costing nearly \$300 million that would include a greater amount of characterization. He asked if Oregon DOE's suggestion of target retrieval rather than full characterization is included as an alternative. Shannon said the current agreement about characterization is two end points rather than estimating what may be chosen for target retrieval. She said that type of estimating will be done in the CERCLA process. She said alternatives analysis for the remaining 37 areas will go into future reports, and future versions of the Lifecycle Report will refer to data from other review processes so as not to duplicate efforts.

- Dirk asked if there is a crosswalk in the Lifecycle Report to demonstrate how the bins fit into various project baseline summaries (PBS) and when they will be staged for disposal. Shannon referred Dirk to Appendix F, noting that PBS costs are categorized in zones rather than by operable units. Larry said the two zones for SW-2 are solid waste and waste management.
- Gerry asked Shannon to confirm the additional 50 percent contingency funds in the projected cost of \$11 to \$16 billion for SW-2. Shannon confirmed and said they used the usual standards for estimating contingency. Gerry said contingency was added twice to the \$16 billion figure. Larry said the lower of the two numbers assumed a reasonable cost, and the additional cost is because of an uncertainty factor applied through risk analysis. He said the cost is likely closer to the lower range. He said the uncertainty and additional contingency is consistent with CERCLA processes. He acknowledged that it appears biased but that DOE followed industry practices. Gerry said justification for the extra contingency needs to be included in the Lifecycle Report. He said there is a conflict between the huge contingency based on not knowing what is in the burial grounds yet and the assumption that the waste will be left in the ground with minimal characterization. John said Gerry brought up the fundamental problem with the burial grounds, which is to fully characterize, the waste must be retrieved, which makes the cleanup decision.
- Dirk asked if the Lifecycle Report includes an estimate of what the natural resource damages will be for retrieval versus no retrieval. Shannon said natural resource damages are not included in the report but may be considered as part of CERCLA. She noted that the natural resource injury assessment is ongoing and is in the report; this information will help with decisions. Dirk said natural resource injury and damages are a part of CERCLA, but are often treated differently. He encouraged DOE to treat them as the same.
- Gerry asked how the Lifecycle Report treats the disposal of tanks. Shannon provided a one page handout on the assumptions made for tank waste. Gerry asked about the dates of Systems Plan Revisions 4 and 6. Pamela McCann, DOE-ORP said Revision 6 will be available by the end of October. Dirk said the Systems Plan is not yet revised annually,

and Revision 4 was issued four years ago. Shannon noted that System Plan Revision 5 looks at different alternatives than what is provided in normal revisions of the Systems Plan. John said Ecology will nominate scenarios to be reviewed every three years that will be included in the Lifecycle Report. Pamela said she will provide copies of a presentation given to the Tank Waste Committee (TWC) on System Plan Revision 5 and future dates for Revisions 6 and 7. Dirk provided information about what is contained in each revision of the Systems Plan, concluding that Revision 6 addresses a large suite of waste and alternatives, how to stage waste, and what to do with the waste. He said Revision 6 can be used for the 2012 edition of the Lifecycle Report.

- The committee reviewed many of the assumptions provided in the Lifecycle Report and determined whether or not to provide comment or advice on the individual assumptions. The committee agreed to provide high level advice for the November Board meeting. They may choose to provide advice on the individual assumptions for future editions of the Lifecycle Report. Gerry asked BCC members and TWC members to review the assumptions for future advice.

Advice development

- Gerry reviewed draft advice that addresses policy level issues with the Lifecycle Report, including lack of incorporation of Board and public cleanup values and a misrepresentation of what is included in the \$115 billion total cleanup cost.
- The committee discussed whether to include the projected actual cost of cleanup, or whether to simply provide a range of what it could be. Gerry said a goal of the Lifecycle Report is to present a range of cleanup options and their costs, but DOE failed to include reasonable costs in their analysis and total estimate. Harold said it is fair to identify items that were not included in the total cost, but not to include a range of costs that has no basis.
- The committee discussed DOE's assumption that the record of decision (ROD) for the River Corridor will determine no more work is necessary along the River Corridor. Gerry said remediation will have to continue along the River Corridor because it is a regulatory compliance. He said acknowledgement of actions and cost for further remediation are missing from the Lifecycle Report. Melinda Brown, Ecology, pointed the committee to a table in the Lifecycle Report that shows all interim actions, regulator action, and decisions left to be made on site. She said the table is helpful for understanding what actions and decisions remain undecided. Gerry noted that DOE assumes there will also not be further work in the burial grounds other than capping the tanks, which goes against the wishes and advice of the Board. Harold said the advice needs to be phrased in a way that shows the Board would like to see additional items included in the total cost figure and regulatory requirements included in analyses. He said additional work the Board would like to see completed needs to be kept as a separate issue. The committee discussed items not included in the total costs. Liz suggested the language to demonstrate

the Board's concerns with the assumptions made and what should be included in total costs.

- Gerry said one of the original purposes of the Lifecycle Report was to demonstrate how activities may be accelerated. He said this version of the Lifecycle Report does not do that.
- Maynard said the Lifecycle Report should provide a summary for all documents referenced as the general public reading the report will not understand what the background documents are.
- Liz drafted the committee's main concerns to be included in the advice and reiterated that the advice addresses revising cost estimates, including options for schedule acceleration, incorporation of background document summaries and links for the public, and potential costs. The committee agreed to circulate the revised draft to the committee in preparation of the November Board meeting. Gerry noted that it is important for the Board to voice their concerns as early as possible, even if changes to the Lifecycle Report cannot be incorporated until the 2013 version. He said the committee can revisit larger issues for more in-depth advice in the February and March 2012 timeframe.

Fiscal Year 2012 Budget Update

Agency briefing

Pamela said the continuing resolution has been approved through November 18, 2011. DOE is operating at a 1.5 percent reduction based on 2011 funding levels (2011 budget minus 1.5 percent). Pamela said DOE does not have further information at this time but DOE will provide an update once allocations have been made.

Committee discussion

- Laura said Washington River Protection Solutions LLC (WRPS) reported that they may have to lay off 475 workers but only had to lay off 200. She asked what happened to cause the shift. Shannon said contractors based this estimate on the worst case scenarios based on the president's proposed budget, and other decisions were made based on the continuing resolution. She said they won't know the full scope of layoffs until there is a firm budget for Fiscal Year (FY) 2012.
- Gerry asked if there are implications for Consent Decree and TPA milestones shifts or delays under the proposed budgets for 2012, noting that DOE cannot operate at the assumed funding level under the continuing resolution. Pamela provided the committee with a link to the project manager monthly report that provides updates on milestones on a monthly basis based on conversations with Ecology. John said that DOE-ORP, like

DOE-RL, is required to provide certain notifications if they believe they will miss a milestone, and Ecology has not received any notifications yet.

- Dirk referred the committee to Figure 3.3 of the Lifecycle Report, noting that \$3.3 billion is the peak funding level for a few years to come. He asked if that is reasonable given Hanford’s history of peaking closer to \$2 billion yearly. Dirk said the budget provided for DOE-ORP during a few years is the total site budget, with no allotted funding for DOE-RL. He said it is a dilemma for the agencies and the committee to consider.

Committee Business

Revise 6 month work plan and determine committee call/meeting needs

The committee updated their 6 month work plan and determined to hold an in-person meeting in January in hopes of reviewing the FY2012 budget. Advice on the Lifecycle Report will be revised and brought before the committee during the committee call on Tuesday, October 18, at 10:30am PDT.

Handouts

DOE-RL 200-SW-2 Burial Grounds presentation
 River Protection Project System Plan and the Lifecycle Report
 BCC 6 Month Work Plan

Attendees

Board Members and Alternates

Dirk Dunning	Susan Leckband	Maynard Plahuta
Laura Hanses	Liz Mattson	Gerry Pollet
Harold Heacock	Jerry Peltier	Bob Suyama

Others

Pamela McCann, DOE-ORP	Ron Skinnarland, Ecology	Cathy McCague, EnviroIssues
Michele Gerber, URS	Sharon Braswell, MSA	Jessica Ruehrwein, EnviroIssues
Melinda Brown, Ecology	Shannon Crum, public	Melissa Thom, EnviroIssues