

**FINAL MEETING SUMMARY**

**HANFORD ADVISORY BOARD  
TANK WASTE COMMITTEE MEETING  
January 13, 2005  
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**

Leon Swenson, Tank Waste Committee co-chair, welcomed the committee and introductions were made.

**DOE-ORP Mass Balance**

Steve Wiegman, Department of Energy-Office of River Protection (DOE-ORP), provided the committee with background on the conceptual model for tank farms. He provided representations of fundamental large-scope facilities to account for all waste materials, and suggested that the model is an evolving tool. The product of this tool provides input into sitewide assessments and can handle the “what if...?” questions of waste disposition. All of this is part of DOE’s work to develop a path forward to treat all the tank waste by 2028. No unpermitted disposal sites exist in the plan; there are no orphan waste streams, and all components are dealt with. Closed tank farms are not shown on the flow sheet, but it may be good to consider including them, since they are part of the Composite Analysis.

Steve explained to the committee that DOE is trying to link schedules so that the model produces results to use in this round of the Composite Analysis, which will put DOE in the position to discuss the entire site and red-flag areas for focus.

**Regulator Perspectives**

- Suzanne Dahl, Washington State Department of Ecology (Ecology), stated that Ecology believes that all tank waste needs to go through pre-treatment. Ecology considers all tank waste to be high-level waste. Also, on the flow sheet, there are some issues with the content of some secondary waste streams.

### **Committee Discussion**

- Leon said the committee looks forward to seeing specific numbers. Al Boldt indicated he was pleased that the process is at the point where DOE is addressing the issue, and he looks forward to commenting on the numbers when they are released.
- Vince Panesko recommended that the solid waste stream coming out of the Liquid Effluent Retention Facility (LERF) and the Effluent Treatment Facility (ETF) be renamed, since it is not really solid waste and is different from the similarly-named solid waste streams coming out of the low activity waste (LAW) and high-level waste (HLW) facilities. Suzanne suggested breaking out a more detailed depiction of the solid waste streams in order to better identify the more detailed components of those streams.
- Steve reiterated that no parts of the systems will have unpermitted releases. Everything released will be permitted.
- Dirk Dunning made several suggestions about the content and depiction of the waste treatment in the flow chart diagram. In particular, he suggested that the diagram would be easier to read if the major waste treatment pathways were made to stand out in some way. Also, since all solid waste has to go through treatment before disposal, that process should be depicted on the chart. The failed melters associated with HLW are a special-case waste stream that needs to be dealt with as HLW. Dirk also suggested it would be helpful to know what the primary concern associated with each waste stream is.

### **Tank Farm Integration Study**

Roger Quintero, DOE-ORP, provided the committee with information on waste management area (WMA) integration studies. He also demonstrated the computer-modeling program that is used to evaluate WMAs. The Tri Party Agreement (TPA) requires DOE do a study for every WMA. These studies feed into closure plans.

DOE plans to share the results of draft studies with Ecology in the spring. Roger described the basic assumption in work planning for landfill closure: retrieve waste from tanks, isolate tanks, close the tank farm with a cap, and impose institutional controls. The demonstration of the computer program showed a three-dimensional depiction of the facilities that are actually on site: aboveground facilities, belowground tanks, pits, diversion boxes, tank waste levels, etc. This program provides the full scope of how to close a tank farm. To depict the facilities the program uses “as-built” engineered drawings and converts them to graphical depictions. The program can identify groups of

components to begin to decide how to approach the closure of an entire area in an efficient and methodical manner.

### **Regulator Perspectives**

- Suzanne said the program could be used when attempting to make decisions about sequencing and integrating closure efforts in WMAs, since it shows connections and what influences what. She said DOE is right on the mark with this tool, and it will be mutually beneficial.

### **Committee Discussion**

- *Are contaminated areas indicated in the program?* Dirk commented he feels that including contaminated areas would impact the strategy for closure. Roger said that contaminated areas are not currently loaded into the program, but they will be added once the full model is completed. Delmar Noyes, DOE-ORP, explained that this deliverable is designed to get some ideas on the table for the closure process. It is not a primary decision document, but will feed into decision documents.
- Wade Riggsbee added the program can also identify clean closure areas or components. He thinks it is an excellent tool.
- *What is the program's underlying software?* The program uses Autocad, based on "as built" drawings. Dirk commented that there are sometimes problems with software systems modifying data to create discrepancies in the modeling. DOE representatives explained the program does not modify data, so those issues are not a problem.
- Maynard suggested that groundwater impacts are an issue that would involve looking at more than just a single tank farm. Roger said that groundwater issues are going to have to be dealt with according to the Resource Conservation and Recovery Act (RCRA). Moses Jarayssi, CH2M Hill Hanford Group (CHG), added that a process to consider impacts to groundwater has been developed. Delmar explained that DOE is attempting to integrate RCRA closure and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) closure, so that the regulating agencies are brought into the process early on in order to know that what is done is correct and adheres to RCRA and CERCLA requirements.
- *What is the confidence level in the as-built drawings?* Roger responded that the confidence level is drawing-specific, but there is a reasonably high level of confidence in them overall. Delmar explained that he was concerned about using the visual program for actual work planning, because he felt it is appropriate only for general planning and visioning. Still, the as-builts are actually the best engineering documents available for putting into the system.
- Paige Knight asked if the basic assumption is made in the models that waste is going to landfills, and then an Environmental Impact Statement (EIS) is done, would that assumption prejudice the EIS? Roger explained that nothing has been approved. The

people doing the EIS are completely independent of the people who are doing the integration study.

- Suzanne suggested that a presentation on the study would be appropriate when the Hanford Advisory Board talks about the status of tank retrieval and closure. Dirk suggested making the presentation to the Public Involvement Committee (PIC). Leon noted sharing it with the PIC might be a good idea and help identify the right format for sharing it with the Board.

### **M-45 Change Package**

Delmar presented information on TPA Change Requests for M-45 and M-62 milestones. He focused on three milestones: M-45-00C, M-62-08, and M-62-11. A joint agreement between Ecology and DOE prompted the change request. All three milestones were moved out to reflect changes in the schedule. The M-62 milestones were moved out eight months, and the M-45 was moved out 12 months, to allow more time to gain information from the bulk vit demonstration project. Public comment on the change package started on Dec 27<sup>th</sup> and ends Feb 10<sup>th</sup>.

### **Regulator Perspectives**

- Suzanne said Ecology is interested in any comments. It is important for Ecology that the milestones were changed, since they wanted to go into the milestones with the best available information.

### **Committee Discussion**

- Al Boldt reviewed the change package for the committee and said that he reads it as scheduling changes only (i.e., shifting dates). Regarding M-62-08, he understands the delay to get enough information to do the test. His main concern focuses on what is in and what is left out of the supplemental technologies report called for in the milestone. Howard clarified that M-62-08 is DOE's attempt to bring forward a more technically rigorous plan. Howard explained that the changes do not actually change any real work; it is all simply commitments on paper.
- Al noted the dates in the schedule don't seem to make sense. Todd Martin said it sounds like M-45-00C is meaningless. From the schedule, it seems as though negotiation is not being initiated until halfway through the time to decide what is going to be done. In his estimation, DOE will not get to the point where they can deal with tanks according to the schedule, and therefore cannot achieve the milestones for 2006. Suzanne said that retrieval and negotiation of tanks has been scheduled through 2006. Suzanne said that she would take comments back and commit to reexamining the timing of the milestones.
- Todd stated the Board needs to comment on this issue, and that comment should ask if the milestone schedule is logical, instead of reprimanding Ecology and DOE for

delaying work. Al and Todd will work on drafting advice and how to explain the issue at the Board meeting.

## **DOE-ORP Status Updates**

### **Waste Treatment Plant**

John Eschenberg, DOE-ORP, presented information on safety performance, progress, and leading technical issues (seismic uncertainties, hydrogen generation uncertainties, and ultra filtration capacity). He also showed recent photos of the Waste Treatment Plant (WTP) construction. The new seismic spectrum will provide understanding of impacts to the buildings. There is a significant amount of margin in the building design, which may cover the seismic spectrum figures. DOE is currently evaluating many of the potential issues with engineering and safety design.

### **Regulator Perspectives**

- Suzanne explained that Ecology receives the design packages from DOE and she commented that John does a good job of keeping Ecology involved in the process. Ecology has done more compliance inspections, and now has two full-time field inspectors. Suzanne also mention a new permit modification about the 2+2 melter configuration will be out for public comment in late January or early February.

### **Committee Discussion**

- *If the WTP had to be retrofitted, what would a timeline would look like?* John indicated that it would likely be an add on, not a retrofit.
- *How do building codes for a building like this compare to uniform building codes?* John said that high hazard building codes have to account for less frequent, but much more severe, seismic events, whereas uniform building codes do not.
- *Has DOE evaluated the bulk reactor data?* John said that the data had been evaluated.
- *Regarding the interruption of work on placement of concrete on the pre-treatment facility, what is the best guess at restart? How will impacts be addressed?* John said DOE has not stopped work, but has slowed the pace of work. He said he wants to know what the margin is for every wall before he is comfortable with release. They are behind schedule by about a month, mainly due to some bad weather. He believes they can overcome any impact that is encountered.

### **Bulk Vit Permitting**

Suzanne Dahl provided the committee with information on the Research, Development and Demonstration (RD&D) permit for the bulk vit facility. DOE is clear to start constructing the first portions of the facility. The facility is designed and operated to meet RCRA requirements, land disposal requirement (LDR) treatment standards, and

regulatory requirements for off-gas treatment. The purpose of the facility is to do testing of the bulk vit process in order to generate technical and economic information to evaluate the process for immobilizing LAW waste at Hanford. The main point of the facility is to determine if the facility is cost-effective and feasible, but also to obtain information on waste form qualifications. For every test campaign, DOE must provide Ecology with a campaign summary report. DOE has to prove they can produce a consistent level of performance from the facility. Suzanne also discussed objectives of bulk vitrification waste form qualification were discussed.

Billie Mauss, DOE-ORP, said that the testing would be done at the bulk vit facility in North Richland.

### **Committee Discussion**

- *If meeting the equivalent of WTP glass does not work out, is there a plan to deal with these waste streams coming from the new facility?* Suzanne said that Ecology believes that the TPA explains a process for managing that, should it happen.

### **Tank C-106 Appendix H Process**

Roger Quintero provided the committee with information on the status of the C-106 Appendix H process. Ecology provided comments in 18 areas; DOE agrees with 8 of them. More workshops have been set up and the agencies hope to resolve the issues by mid-February. At that point, DOE will resubmit the documents to Ecology for final approval.

### **Committee Discussion**

- *What happens if DOE's resubmittal is rejected?* Moses suggested that if the resubmittal does not receive approval, the TPA provides guidelines for dispute resolution.

### **Committee Business**

- The committee agreed that a February call is needed. A call is scheduled for Monday, February 14 at 3pm.

### **Handouts**

- DOE-ORP Mass Balance waste stream treatment and disposal flow chart, Steve Wiegman, 1/7/2005.
- Hanford Federal Facility Compliance Agreement Change Requests For M-45-00C, And M-62-08/M-62-11, Delmar Noyes, DOE-ORP, 1/13/2005.
- Waste Treatment and Immobilization Plant (WTP) Project, John Eschenberg, DOE-ORP, 1/13/2005.

- Research, Development, and Demonstration Permit for the Demonstration Bulk Vitrification System, Billie Mauss, DOE-ORP, 1/13/2005.
- Demonstration Bulk Vitrification System, Billie Mauss, DOE-ORP, 1/13/2005.
- Waste Management Area Integration Studies, Roger Quintero, DOE-ORP, 1/13/2005.
- Single-Shell Tank C-106 Appendix H Exception Request, Roger Quintero, DOE-ORP, 1/13/2005.

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**Attendees**

**HAB Members and Alternates**

Al Boldt	Pam Larsen	Maynard Plahuta
Shelley Cimon	Susan Leckband	Mike Priddy
Dirk Dunning	Sandra Lilligren	Wade Riggsbee
Harold Heacock	Todd Martin	Dick Smith
Paige Knight	Vince Panesko	Leon Swenson

**Others**

Steve Chalk, DOE-RL	Suzanne Dahl, Ecology	John Britton, BNI
	Dib Goswami, Ecology	Jim Henschel, BNI
Jeff Daniels, DOE-ORP	Jane Hedges, Ecology	Sue Kuntz, BNI
John Eschenberg, DOE-ORP		Janet Badden, CHG
Rob Gilbert, DOE-ORP		Jim Honeyman, CHG
Howard Gnann, DOE-ORP		Moses Jarayssi, CHG
Delmar Noyes, DOE-ORP		Richard Raymond, CHG
Erik Olds, DOE-ORP		Brad Smith, CHG
Roger Quintero, DOE-ORP		Kathy Tollefson, CHG
Steve Wiegman, DOE-ORP		Lynn Lefkoff, EnviroIssues
		Jason Mulvihill-Kuntz, EnviroIssues
		Sharon Braswell, Nuvotec/ORP
		Annette Cary, Tri-City Herald
		John Martell, WDOH