

**DRAFT MEETING SUMMARY (v.0)**

*DRAFT - NOT APPROVED BY COMMITTEE*

**HANFORD ADVISORY BOARD**

**COMMITTEE OF THE WHOLE**

*May 7, 2003*

*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**

Shelley Cimon welcomed the committee and briefly reviewed the agenda. Marla Marvin, Department of Energy Richland Office (DOE-RL) reviewed the conflict of interest issue. She commented that Todd’s email to Hanford Advisory Board (Board) members was good advice and that discussion on the environmental impact statement should not be greatly limited. DOE Headquarters is in the process of looking at specific potential conflict-of-interest concerns across the complex and making case-by-case decisions on this matter. DOE expects to make these decisions in the near future.

**Revised Draft Hanford Solid Waste Environmental Impact Statement**

Mike Collins, DOE-RL, reviewed what has changed in the Revised Draft Hanford Solid Waste Environmental Impact Statement (HSW-EIS), why the changes were made, and how the Board’s comments were addressed.

The changes to the revised draft HSW-EIS include:

- Alternatives for the disposal of immobilized low-activity waste (ILAW).
- Alternatives for the disposal of low level waste (LLW) in lined trenches.
- Alternatives for disposal of waste in mega trenches.
- Cumulative impact information from the Systems Assessment Capability.

- Impacts of transporting LLW, mixed low level waste (MLLW), and transuranic (TRU) waste to and from Hanford through Washington and Oregon.
- Discussion of modeling, waste volume, waste inventory and other assumptions and uncertainties.
- Information that puts the HSW-EIS scope into the bigger picture of Hanford and DOE cleanup efforts nationwide.
- Impacts of Hanford-only waste versus waste from offsite.

The changes were made to:

- Address comments received on the first draft.
- Add new information that had become available since the first draft.
- Address ideas from the Challenges, Constraints to Cleanup team (C3T) such as disposal of ILAW, LLW, and MLLW in a single facility.
- Allow the public an opportunity to review and comment on the new information.

The following were some of the comments by the Board in response to the first draft of the EIS and DOE's responses to those in the revised draft of the HSW-EIS:

- Withdraw and reissue the draft HSW-EIS.
  - The HSW-EIS was revised to address comments and reissued.
- Address the impacts of past and continued waste disposal at Hanford.
  - The cumulative impacts of drinking groundwater and river water using the Systems Assessment Capability (SAC) were added to the HSW-EIS.
- Compare Hanford-only vs. offsite waste.
  - A Hanford-only waste volume has been analyzed for each of the alternatives.
- Discuss long-term management.
  - Additional discussion on long-term management and stewardship is included in the HSW-EIS.
- Analyze a range of treatment and disposal alternatives.
  - Several new alternatives were analyzed in and added to the HSW-EIS.
- Analyze the impacts of TRU waste from offsite generators.

- The impacts of 1500m<sup>3</sup> of TRU waste from offsite generators have been added to the HSW-EIS.
- Analyze alternatives for the disposal of LLW in lined trenches.
  - Several new alternatives were analyzed in the HSW-EIS.
- The HSW-EIS is inadequate because it only addresses groundwater impacts for a single well one k/m downstream.
  - The HSW-EIS has been revised to clarify the “one-kilometer well”.
- Regard advice #132 on input from the Exposure Scenarios Task Force.
  - The HSW-EIS evaluates the impacts from three exposure scenarios.
- The EIS is inadequate because modeling and waste inventory assumptions are not explained.
  - The HSW-EIS has been revised to more clearly state modeling and inventory assumptions. Information on uncertainties has also been added.
- Include an analysis of the impacts from malevolent events
  - The impacts of malevolent events during waste transport have been added to the HSW-EIS.

### **Regulator Perspectives**

Dave Einan, Environmental Protection Agency (EPA), said the EPA review is in progress. They will not have their letter out until very close to the end of the comment period. At this point, EPA believes DOE has tried to be responsive to the comments and have analyzed the alternatives we asked for. They provided more detail on mitigation actions, some comments were about groundwater impacts and in this version they talk about some things that can be done to mitigate.

DOE used some conservative assumptions in estimating the groundwater impacts, and in some cases it is overestimating potential impacts. EPA would like to see estimates developed using reasonable assumptions. Because of this, it is hard to draw distinctions between the alternatives.

EPA still wants to see groundwater impacts studied at facility boundaries instead of just 1 km away. That analysis will probably make groundwater impacts look worse. Some of the actions identified in the revised draft as possible mitigation may need to be built into the alternatives. At this point in their review, EPA says that provided their comments are addressed in the final, the revised draft is probably adequate to proceed to the final.

Max Power, Ecology, said Ecology is going back to look at how well this revised draft addresses comments and concerns from before. Those comments are still being gathered from the staff. Ecology's comments are still a work in progress. Ecology had expressed clear expectations that this draft needed to put a context around decisions both at Hanford and complex-wide, and the draft needed to evaluate alternatives from C3T, and provide analysis to support future permit actions.

While Ecology recognizes that the National Environmental Policy Act (NEPA) is sketch on guidance for cumulative impacts, there still needs to be some credible analysis on cumulative impacts of disposing of just Hanford waste vs. including offsite waste. Ecology is still looking at the long-term view of what the cumulative implications are. They are working at a technical level to see what limitations there are, what the SAC assumptions are, and if there is much to distinguish between each of the alternatives.

Mike Priddy, Department of Health, said they have so far found the revised draft's responses to be adequate but DOH has three new comments so far. Since fish consumption is so important to so many, DOH questions why fish analysis isn't included. Drinking water standards must also be addressed. And a summary should be provided that makes it easier to follow many different scenarios, alternatives and results, and make it easier for non-technical general public to understand the analysis.

### **Issue Manager Homework Reports**

Dirk Dunning briefly discussed some of the issues he had noted in the revised draft HSW-EIS.

- The HSW-EIS is not a comprehensive look at the impacts of all the existing waste at Hanford. The waste is broken down into different pieces, each piece with its own EIS. If all of the waste is to be studied, then the studies should be completed at the same time. The HSW-EIS should have been released concurrent with the Tanks Waste EIS. The comment period for these two EIS should have closed simultaneously.
- The HSW-EIS does not detail the volume of groundwater or vadose zone that would be committed at any point in the cleanup. The commitment of groundwater is not fully discussed and needs more study. The committed water would no longer be cleaned to drinking water standards and would be considered as a waste disposal loss. The Board should discuss if this is an acceptable commitment.
- The use of the SAC in the HSW-EIS is of concern. The SAC does not appear to be modeling what is occurring on the site. In this EIS, the SAC does not investigate ecological concerns. The SAC stops modeling at the river without looking at the impacts to fish or to the near shore zones.
- For all but a few of the alternatives, the Hanford-only waste alone exceeds the DOE exposure limit of 25 millirem per year. In the Native American scenario, this results

in exposure limits greatly above the regulatory limits. This may not occur for 10,000 years and it is unrealistic to expect the site will be fully regulated for this amount of time.

Issue Manager Gerry Pollet briefly discussed some of the background concerns from the HSW-EIS and the associated transportation concerns.

- The revised HSW-EIS focuses on new facilities and misses the requirements to include consideration of required actions for the existing waste and facilities. Pre-1970's transuranic waste (TRU) is not analyzed in this EIS. However, these containers are releasing waste into burial grounds with unknown conditions. This TRU will impact any new facilities described in the HSW-EIS.
- The current conditions of the site need to be investigated. The Department of Energy is adding TRU mixed with organics and other hazardous wastes to unlined burial grounds. This practice is expected to continue for a significant period of time. Due to this expectation, it is important that the current conditions of the site are accurately described in each alternative in the EIS. The current site conditions should also be compared with the coordinating waste management activity.
- A through Model Toxics Control Act (MTCA) assessment of the groundwater is needed. The current plans for groundwater are deficient. A compliance schedule for groundwater monitoring should be developed and followed. The Washington State Department of Ecology (Ecology) has found the use of unlined burial grounds is impacting the groundwater.
- Hanford cleanup funds are used to subsidize offsite waste disposal in unlined burial grounds. A DOE study found that offsite generators pay less than 50% of the disposal cost. In FY2000 this was a subsidy of more than 3 million dollars. These generators are not charged any fully burdened long-term cleanup costs. The EIS is inadequate if it does not consider the alternative of charging offsite generators the full cost of low-level waste disposal at Hanford. Further study of this alternative may find it is less expensive to dispose of the waste elsewhere.
- In the revised HSW-EIS, there is still not a Hanford-only waste alternative. Also, there is not an alternative for ending the use of unlined burial grounds this year. It is reasonable to expect the use of the unlined burial grounds to end however it may mean offsite waste may need to go elsewhere.
- There are several concerns regarding the transportation of waste to and from Hanford. A past study by the State of Washington on the safety of shipping trucks en route to Hanford found serious safety defects in many of the trucks. This raises many questions since under this EIS shipments of waste will increase. Second, a study completed by Oregon Department of Transportation found 66 of the bridges on the Oregon interstates are weight restricted and will require significant detours of the shipping trucks. These detours will route the trucks into local communities on

secondary roads. The EIS does not analyze these detours or look at accident scenarios for these detours.

- The following impacts of this EIS need to be assessed:
  - There is a lack of an inventory of the low-level waste in the burial grounds.
  - The performance assessment fails to include dangerous wastes.
  - The conceptual model's inadequacy in explaining the groundwater indications or the presence of organics in the vadose zone.
  - The need for a conceptual model based on current site conditions.
  - There is a lack of soil and groundwater monitoring in the burial grounds.
  - The disposal of waste into unlined burial grounds.

Leon Swenson presented the concerns of the Tank Waste Committee in regards to the HSW-EIS.

- The EIS assumes that all of the ILAW will be vitrified. However, it does not appear, from discussions with the committee, that this will happen as assumed. Because this assumption is not guaranteed, the EIS must look at different waste treatment technologies, which it has not done.
- The DOE has not fully analyzed the irretrievable tank wastes (heels). These wastes need to be analyzed. With the upcoming tank waste EIS the committee needs to discuss how this EIS and the HSW-EIS fit together.
- The tanks committee is concerned about landfill closure of the tanks. These tanks are highly contaminated and the closure of these represents another source of highly contaminated waste. The impacts of these closures should be included in the HSW-EIS.

Committee member Allyn Boldt had several comments regarding the EIS. These comments are further developed in a letter to the Department of Energy on the HSW-EIS.

1. The draft HSW-EIS uses a dated and obsolete value of 211,000 cubic meters for the ILAW volume.
2. Supplemental technologies increase the volumes of waste.
3. The largest single contributor to groundwater contamination was not included as a waste source.
4. The draft HSW-EIS did not evaluate the environmental impact of hazardous chemicals and evaluated radionuclides only.
5. Calculated groundwater concentrations at the regulatory point of compliance were not provided.

## **Brainstorming for Advice Points on the HSW-EIS**

The committee of the whole discussed concerns related to the EIS. These were added to flip charts in the front of the meeting room. After a comprehensive list was made, the committee compared this listing to the HSW-EIS advice matrix developed by Todd Martin. The numbers in parenthesis refer to topic numbers from the matrix that are associated with the listed comment. The flip chart notes follow below.

### ***Flip Chart Notes on the HSW-EIS, May 7, 2003***

- Lines of analysis at 1km do not provide adequate analysis. (22)
- Assumes ILAW will all be vitrified – not the plan currently. (9+)
- Waste imports cannot impact site cleanup budgets. (28)
- If new facilities needed, they should be installed ASAP.
- Ongoing, long-term funding mechanism needed for long-term stewardship. (6, 38)
- Processing/handling of offsite wastes must not delay processing of Hanford wastes.
- Central Waste Complex waste – decision to move ½ of the waste out is not analyzed in the EIS (prior to action). (44)
- Analysis uses 25 millirem standard – should use relevant EPA & MTCA standards.
- Accident analysis assumes no chemical waste and that all wastes are treated to LDR. (7)
- Any wastes that are disposed on-site must meet all regulatory requirements.
- EIS does not adequately address or assess existing wastes and facilities. (2) (Gerry)
- Fully burdened cost. (17, 42)
- Transportation – detours due to weight restrictions off interstates not analyzed. (30)
- Significant risks that were not analyzed in PEIS were not analyzed in HSW-EIS.
- No reasonable Hanford-waste only alternative. (4, 26, 13, 46)
- No alternative that shows unlined burial grounds closed.
- Groundwater plumes from disposal sites – conflicting statements on pages; 32, 35, 36, 37. (25) (Keith Smith)

- Integrity of caps and vegetation intrusion. (36)
- ILAW – inconsistencies in hazards because of possible different forms and subsequent RAD levels. (25, 37)
- Chemical exposure inconsistencies reality vs. predictions.
- Not comprehensive – significant solid wastes not included (i.e. Purex tunnels, tanks, reactor components) (5, 33)
- SAC concerns – modeling needs to assure it is being conservative. (25)
- Break up EIS into Hanford-only (inclusive) and off-site waste.
- If EIS is proposing Hanford as a national waste site or “sacrifice zone” it should say so.
- Need better explanation of ILAW PA, and clarification of source of analysis and how it is used. (25, 45)
- Tank waste treatment options not reflected (supplemental technologies). (7, 37)
- EIS does not analyze and discuss impact on fish (spec. salmon) and is not adequate for rest of ecosystem. The conditions have not been updated since the fire. (2, 8, 24)
- Cite 1975 ERDA, identify serious technical flaws – this EIS fails to resolve these uncertainties from that document. Particularly those concerns related to Pu uptake and Pu mobility and transport by surface organics and bacteria.
- Doesn’t look at other sites – cite previous advice. (3)
- LETF waste does not include contributions from the WTP. (7,2, 5)
- EIS does not address hazardous waste component. (10, 11, 12, 28, 40)
- Tanks heels. (31)
- DOE has proposed alternative treatment for tank waste and disposal and these are not analyzed in this EIS. (7, 37)
- Final (in whatever version) should be accessible and easy to see how current round of comments were responded to.
- Timing of releases/comment periods and HAB schedule.
- Timing of this EIS does not support public involvement.

- Request that HAB's advice be formally accepted from June Board meeting.
- CLUP is cited as basis – it only extends for 50 years – beyond that, land use is unspecified and HAB values are unrestricted use (including groundwater) outside the core zone. (6, 38)
- Urge DOE to continue to allow for public involvement.
- Inadequate time for public review and comment. Requests for extensions not granted. HAB is not the only public involvement venue.
- Organization of response to comments very unwieldy and not user-friendly.
- Ask for extension of period between final version and ROD to have time to review final and DOE's response to comments and have a dialogue about the planned ROD.
- No comprehensive document that captures all of the Hanford waste in one place or organizes impacts waste site by waste site. (2, 28)
- For comprehensive review, this EIS should not close for comment until the TW EIS is also completed. (5, 28, 37)
- This EIS looks at off-site ER waste coming to Hanford, even though PEIS excludes these wastes.
- Should DOE be "claiming" groundwater (irretrievably committed)? (23)
- Under Native American scenario, exposure levels at 10,000 years exceed limits.

From the flipchart notes, the Committee of the Whole identified nine top priority issues that lacked adequate coverage in the HSW-EIS. The committee members listed in parenthesis are developing advice points for the indicated topic. This list of nine will also be given to regulators and the agencies for them to address at the Committee of the Whole meeting on May 20, 2003.

**1. Risks not analyzed in PEIS or in HSW-EIS** (GERRY)

- Hazardous Wastes
- Pre-1970's TRU
- Facility Hazards
- ER Waste

**2. Lack of Closure on Previous EIS Issues** (HAROLD)

- 1975 ERDA – Tec Issues
- K-Basins Sludge

- Life Cycle Costs Before Decisions

### **3. Ecosystems** (GREG)

*Did not analyze that*

- Salmon

### **4. Transportation** (GERRY)

- Detours off interstate
- Route Specific

### **5. Integration Between TW EIS and HSW-EIS** (AL)

- Disposal Issues Housed Where?

### **6. Public Involvement** (LEON)

- Will the HAB's June advice be fully considered?

### **7. Scope** (KEITH, et.al.)

- All wastes:
  - ILAW,
  - Tank heels,
  - Leaked waste,
  - RCRA/CERCLA,
  - Hazardous,
- Pre-1970's, Navy
- Ecology – LETF
- Lack of integration between EIS – loopholes
- Piecemeal in several EISes
- No comprehensive, concise overview – without it, no way of determining
- Interactions between current proposed EISes

### **8. Irretrievably committing groundwater** (DIRK)

### **9. Groundwater points of compliance must be analyzed** (DIRK)

### **Handouts**

- Hanford Advisory Board Comments and the Hanford Site Solid (Radioactive and Hazardous) Waste Program Environmental Impact Statement, Michael Collins, May 7, 2003
- Hanford Advisory Board Advice #127, April 5, 2002
- Tanks Committee Comments, May 7, 2003
- Draft Letter from Allyn Boldt to Michael Collins, Allyn Boldt, May 6, 2003
- Committee of the Whole Agenda, May 7, 2003
- HSW-EIS Matrix, Todd Martin, May 7, 2003
- Response Letter to the Hanford Advisory Board, Keith Klein, May 7, 2003

- Hanford Advisory Board Advice #136, September 6, 2002
- Power Point Presentation, Gerry Pollet, May 7, 2003

**Attendees**

**HAB Members and Alternates**

Allyn Boldt	Dirk Dunning	Dave Rowland
Ken Bracken	Gariann Gelston (by phone)	Dan Simpson
Greg deBruler	Clare Gilbert	Keith Smith
Tom Carpenter	Harold Heacock	John Stanfill
Shelley Cimon	Maynard Plahuta	Leon Swenson
Jim Curdy	Gerry Pollet	Jim Trombold (by phone)
		Charles Weems

**Others**

Michael Collins, DOE-RL	Rick Bond, Ecology	Nancy Myers, BHI
George Sanders, DOE-RL	Fred Jamison, Ecology	Liana Herron, EnviroIssues
Yvonne Sherman, DOE-RL	Max Power, Ecology	Penny Mabie, EnviroIssues
	Mike Priddy, WDOH	Barb Wise, Fluor Hanford
	Dave Einan, EPA	Kim Ballinger, Navarro
		Sharon Braswell, Nuvotec
		Jan Gilbert, Portland Citizen