



SRS Citizens Advisory Board

Waste Management Committee

Meeting Summary

October 22, 2001
Augusta Sheraton Hotel
Augusta, GA

The Waste Management Committee (WMC) of the Savannah River Site (SRS) Citizens Advisory Board (CAB) met at the Sheraton Augusta Hotel on October 22, 2001. Attendance was as follows:

CAB Members

Wade Waters*
Bill Willoughby*
Gerald Devitt*
Meryl Alalof*
Vera Jordan*
Perry Holcomb*
Heather Simmons*
Karen Patterson*
Becky Dawson*
Murray Riley*
Lola Richardson

Stakeholders

Lee Poe
Chuck Powers
Lynn Waishwell
Mike French
Bill Lawless
Brandon Haddock
Bill McDonell
David Alalof
Rick McLeod, CAB Tech Advisor

Regulators

Keith Collinworth, SCDHEC

DOE/Contractors

Charlie Anderson, DOE
Gail Whitney, DOE
Gerry Flemming, DOE
Winchester Smith, DOE
Nick Delaplane, DOE
Becky Craft, DOE
Dave Amerine, WSRC
Teresa Haas, WSRC
Steve Piccolo, WSRC
Elmer Wilhite, WSRC
Sonny Goldston, WSRC
Ken Crase, WSRC
Kelly Way Dean, WSRC
Helen Villasor, WSRC

***Denotes members of the WMC**

Wade Waters opened the meeting promptly at 7:00 p.m. by inviting introductions from the attendees. Mr. Waters noted that because of many recent activities occurring within the High Level Waste (HLW) Program it was important for the WMC to hear a division update. Mr. Waters then introduced Mr. Charlie Anderson.

High Level Waste Progress Report

Charlie Anderson, DOE opened his presentation by providing an overview of the HLW system. He pointed out that there are low, medium, and high activity fractions of each of the salt solutions, supernate and saltcake, in the tanks. With this fact in mind, Mr. Anderson said there might not be one catchall solution to the salt processing alternative. Therefore, DOE chose a multi-pronged path to minimize risk and reduce overall cost in the Record of Decision (ROD) that was released on October 17, 2001, indicating that Caustic Side Solvent Extraction (CSSX) was the selected alternative. However, in parallel, Mr. Anderson said that DOE will evaluate processing alternatives

to maintain operational capacity and flexibility in the HLW system to disposition the waste quicker.

Karen Patterson and Bill Lawless both questioned this DOE alternative selection. Mr. Anderson explained that low-curie saltcake could be disposed of in Saltstone, saltcake could be disposed of with an alpha removal process to remove the actinides, and higher curie saltcake would be disposed of by removing cesium in the CSSX processing facility. Mr. Anderson then explained each of the processes in more detail.

The plans to dispose of low curie saltcake to Saltstone (SS) without an alpha strike would involve using fractional crystallization to separate salt from cesium-rich supernate. Processing this low activity salt to Saltstone reduces the volume of waste requiring further cesium separation. Saltstone is currently under review now with plans to start up the facility in spring 2002. The alpha removal capability would involve removing actinides, primarily uranium, plutonium and strontium. The existing Management & Operating (M&O) contractor would use existing facilities and equipment. This well-developed technology is sorption using Monosodium Titanate (MST) and crossflow filtration. Lastly, a CSSX salt waste processing facility would be the primary means for cesium removal for high curie salt waste. Back-up technologies (ion exchange or small tank precipitation) could help deal with problems better on a smaller scale for one or two tanks. Ultimate capacity of CSSX facility will be determined based on success of low activity disposal and M&O alpha separation HLW system requirements conceptual design data.

Ms. Patterson and Mr. Collinworth questioned whether the goal was to remove only enough waste to meet the Waste Acceptance Criteria (WAC) standard for Saltstone or to get out as much of the radioactivity as possible. Mr. Anderson answered that it is our goal to remove as much waste as reasonably possible and the reason for the back up was to deal with the uncertainties. Mr. Anderson emphasized that one of the back-up technologies wasn't better than the other. SRS also wanted to make sure that the back up integrated with the technology at other sites, primarily Hanford.

Next, Mr. Anderson outlined the HLW disposition process from the tank farms through the various processes and eventually to the Defense Waste Processing Facility (DWPF), Saltstone, or Effluent Treatment Facility (ETF).

Keith Collinworth questioned DOE's decision and whether or not this was a long- or short-term goal. Mr. Anderson answered that the goal is to disposition high level waste as quickly and efficiently as possible. He emphasized that the intent of the ROD was not to select a single technology. The plan all along had been to have a back-up technology.

Lee Poe and Karen Patterson asked about the size of the funding requirement. Mr. Anderson responded that this project might be labeled as a new Line Item or sub project. There are many areas DOE is looking at to save money and cut costs. There are existing facilities that can be used and the infrastructure is much improved from previous years. Conduct of operations and other improvements are beginning to pay off for the site.

Responding to a question about the driving force for this course of action, Mr. Anderson said that it is time and schedule, and pointed out that no material is scheduled for disposition before 2010. DOE would like to get out of older style tanks and close them. Mr. Anderson noted that analyses concerning uncertainties, funding and budget have been performed; however, some uncertainties cannot be answered until work with real waste has been done.

Ms. Patterson asked to go on record as saying the Salt Processing Focus Group needs to continue in its capacity of following the Salt project. Mr. Waters asked for a presentation on tank space management at the next meeting, which is scheduled for November 13, 2001.

Mr. Anderson concluded his presentation by outlining DOE's next steps in the process. They are as follows:

- Continue implementation of low curie salt disposal
- Develop and implement alpha removal capability
- Continue research and development on backup technologies and alternate alpha removal technologies
- Finalize Acquisition Strategy and issue Request for Proposals
- Award two engineering, procurement and construction contracts by early 2002 and initiate conceptual design for the Salt Waste Processing Facility (SWPF)

High Level Waste Status Update

Steve Piccolo began his presentation on the system status and salt processing by providing a two-year look at the high level waste system, and mentioned that this is HLW's way of allowing people to see if HLW has met its commitments. Mr. Piccolo pointed out that DWPF was ahead of goal, and the next sludge batch is due in eight weeks. Regarding tank space management, HLW has lowered waste below the leak sites, recovered Tank 49, and gained 1.5M gallons in space. Also, all three evaporators are running (2H, 3H and 2F).

Mr. Piccolo pointed out that the WMC and the Salt Focus Group have questioned the HLW infrastructure load and transfer. In 2001, HLW was able to triple the transfers because they learned to manage the process better. So much better, Mr. Piccolo said, that HLW can now handle more than 10M gallons a year. Although the schedule for Tank 19 Closure has slipped a little, Mr. Piccolo emphasized that the dates will be met.

Mr. Piccolo moved on to the salt processing discussion. Whatever process is utilized, the first step of ion exchange or CSSX is to remove the actinides. The other key element is to get salt dissolution going. The plans are to maximize the existing facilities for use in processing low curie salt, to have an actinide removal demonstration with the goal of emptying more tanks quicker, and to minimize risks in the tanks with continued immobilization by vitrification and grout.

Mr. Piccolo outlined the plans for low curie salt. Since DWPF is the bulk producer of recycle water, it would make sense to use this waste to dissolve salt for the crystallization process. The salt rich solution from Tanks 41 and 50 would be sent to Saltstone or recycled through the evaporators. Mr. Collinsworth questioned the Waste Acceptance Criteria and permitting for this option, and pointed out that this was the first time there had been discussion about low curie salt without the ITP process. Mr. Piccolo stated the waste was under permit, but some other issues may have to be discussed. WSRC and the state of South Carolina will discuss the issues involved in this plan.

Mr. Piccolo continued his discussion with an explanation of the alpha sorption option or actinide removal. In a simple configuration, a relatively small tank to water wash the MST would be used. The process would then involve taking this material, striking it, and filtering out the solids. The stream with solids would be sent to DWPF. Another stream with filtrate would be sent to Saltstone. Mr. Piccolo then outlined the same concept using two tanks, pointing out that two tanks would allow more throughput. Both processes are reasonably low cost options to make space. When questioned by Mr. Poe, Mr. Piccolo answered that precipitation would work with the two-tank configuration and that these are small configuration tanks that SRS already has.

Mr. Piccolo informed the group of next steps to be taken. For example, a dedicated program/project team has already been formed. Material balance and scope of modifications, and a detailed cost estimate and schedule must be developed. A rough flow chart has been developed, but numbers need to be finalized. Waste Incidental to Reprocessing must be developed. Communication with major customers, stakeholders, regulators and the technical community

must be set up. The mission and driver must be confirmed with stakeholders. At that point, the HLW team would be ready to deliver a detailed update to the WMC, probably in the next three to six months. Any information given earlier than that would not be a fair enough flow of information. When asked when the communication process would begin, Mr. Piccolo answered that it has already begun with DOE.

Lee Poe made two public comments. The first being that there had been rumors of Americium/Cesium (AM/CM) being sent to HLW, but this has not been officially confirmed for the WMC. Mr. Anderson confirmed that plans have been made to cancel the current AM/CM project. He also confirmed that the project had been given authorization to proceed to HLW. Mr. Poe also expressed concern over the Safety Assessment for the HLW issues.

Mr. Poe is also concerned about CAB recommendation #135 that outlines annulus cleaning. Mr. Piccolo outlined some of the processes that have been tried on the annuli, such as acid wash, flushing, and vacuuming. However, a decision can not be reached until there is agreement on the definition of tank closure

Programmatic Environmental Impact Statement (PEIS) on Disposition of Radioactive Scrap Metals Draft Motion Review

Meryl Alalof, motion manager read the background information on the PEIS and discussed the alternatives that have been identified in the document. Ms. Alalof also noted that the public comment period had been extended to November 9, 2001, allowing the CAB with an opportunity to provide comments on the scope of the PEIS.

In the recommendation portion of the draft motion, Ms. Alalof said the SRS CAB is recommending the following:

1. Convey to the general public the various alternatives in language that is clear and easy to understand.
2. Include the expected inventory of all scrap metal and the financial impacts of implementing each alternative including disposal cost, expected income from recycling, costs for detection methodology, processing costs, record maintenance, etc.
3. Identify the alternative standard it would consider using in Alternative 2 (control the release of scrap metal from DOE radiological areas consistent with alternative standards to DOE Order 5400.5).
4. Address the anticipated public involvement and communications program in the PEIS.
5. Identify the health effects to site workers, off-site workers, and the general public for each alternative under consideration.
6. Identify the long-term (10,000 years) health and environmental impacts of metal compounds expected from the degradation of scrap metal exposed to the elements and potential landfill leachate.

Rick McLeod, the CAB's Technical Advisor was asked to make a few minor editorial changes to the draft motion before it was to be presented to the full Board at its meeting the next day. Wade Waters complimented Ms. Alalof on her first presentation to the WMC.

Operating Strategies for the Solid Waste System Plan Draft Motion Review

Bill Willoughby, motion manager for the draft motion, explained the background information for this draft motion and noted that on several occasions, the issue had been presented to the WMC. Mr. Willoughby said that DOE recently asked Westinghouse Savannah River Company (WSRC) to offer recommendations in November on the study, which had been performed, on the effects of eliminating compaction of job control waste. Mr. Willoughby reported that the WMC believed it

should also take the opportunity to address its concern that before any decisions are made on the super compactor, further investigation is needed.

Mr. Willoughby provided the following operating strategies that were being recommended by the CAB for inclusion in the Solid Waste System Plan and noted that the CAB be provided with an update on the operating strategy study by March 22, 2002:

1. Investigate alternatives to the B-25 disposal containers.
2. Investigate alternatives to reduce the subsidence repair costs.
3. Evaluate alternative capping strategies.
4. Evaluate alternatives to optimize land utilization.
5. Provide a worker exposure assessment for each strategy.

After a brief discussion, Mr. Rick McLeod was asked to make some editorial changes to the draft motion before it was to be presented to the full Board at its meeting the next day.

Public Comment

There were no public comments.

Wade Waters adjourned the meeting at 9:15 p.m.

Meeting handouts may be obtained by calling 1-800-249-8155.