



SRS Citizens Advisory Board

Waste Management Committee

Meeting Summary

December 11, 2001
North Augusta Community Center
North Augusta, SC

The Waste Management Committee (WMC) of the Savannah River Site (SRS) Citizens Advisory Board (CAB) met at the Community Center, North Augusta, SC on December 11, 2001.

Attendance was as follows:

CAB Members

Wade Waters*
Bill Willoughby*
Jimmy Mackey
Meryl Alalof*
David Adcock
Murray Riley
Perry Holcomb*
William Lawrence*
Karen Patterson*
Vera Jordon*

Stakeholders

Bill McDonell
Russ Messick
Mike French
Rick McLeod, CAB Tech Advisor
Cy Banick
Brandon Haddock
John Meyers
Lee Poe

DOE/Contractors

Tor Osmundsen, WSRC
Julie Petersen, DOE
Gerri Flemming, DOE
Bob Hinds, WSRC
Sonny Goldston, WSRC
Teresa Haas, WSRC
Kelly Way, WSRC
Ron Campbell, WSRC
Joe Carter, WSRC
Elmer Wilhite, WSRC
T. J. Spears, DOE

***Denotes members of the WMC**

Wade Waters opened the meeting at 5:00 p.m. by inviting introductions and thanking everyone for coming.

Public Comment

Mr. Poe expressed his pleasure at the meeting notice announcing the meeting was to be held in Aiken, only to receive a later notice indicating the meeting location had been changed to North Augusta. He would like for a DOE person to look into the practice of DOE's being permitted to "bump" others at a moment's notice from the Aiken Federal Building, even after the reservation has been in place for weeks. Geri Flemming agreed to look into this situation.

Mr. Waters indicated that he would give a very brief review of the Am/Cm project at the end of the night's presentations.

SRS Transuranic (TRU) Waste Program Review

Dale Ormond, DOE, Waste and Operations Division, spoke to the group on the TRU waste program. He began by explaining that the HandSS-55 is a self contained system that goes into the drums, moves and sorts the contents, and then removes prohibited items. These items are then packaged in a way that is acceptable for disposal. Only drums with a need to be repackaged will go to this facility. All of this take place inside a glove box. Once a drum is pulled into the facility, it will be shredded.

Mr. Poe asked what became of the items that are removed from the drums. Mr. Ormond responded that they are actually fixed or stabilized before they are sent to the Waste Isolation Pilot Plant (WIPP). This project provides Savannah River (SR) a means of handling this waste until the high activity TRU facility is built in 2015.

Mr. Ormond showed and explained an artist's conception of what the HandSS-55 facility will look like. He then showed a video of the facility. The facility will be assembled in Butte, Montana. They will build it, test it, disassemble it, and send it to SR. Here it will be reassembled, and put out in the burial grounds. It will not have any contamination when it arrives. SR engineers will participate in development of the project from the start.

Mr. McDonell asked if there were a radioactive limit to this facility. Mr. Ormond answered that this facility is a category three facility. SR doesn't anticipate putting PU-238 in this facility. Mr. McLeod asked if this facility would be operational 24 hours a day, 7 days a week. This facility will operate one shift and will handle 4 drums per shift. When asked about cost, Mr. Ormond indicated that a full cost analysis hasn't been done.

Mr. Poe asked why SR deals with these drums if they are low activity. Mr. Ormond answered that the contents are still TRU waste, and the prohibitive items have to be removed before they can be sent to Carlsbad. This facility will take the place of the high activity TRU facility until it is operational in 2015.

Mr. Ormond continued. Different organizations have built the various components. It was assembled in Butte, Montana. It is scheduled to arrive at SRS late 2003 with operations scheduled to begin in late 2004/early 2005. DOE has a performance-based incentive with Westinghouse to operate this facility. This facility provides a means for SRS to process waste that would otherwise stay until the high activity TRU facility is operational in FY'15. The Focus Area will fund this state of the art \$18-20M project.

Mr. Ormond continued to show pictures of the facility. He described the assembly progress, the waste repackaging module, and the welding process. When asked by Mr. Meyers about drum's being vented, Mr. Ormond responded that they are vented in the bottom section of the facility. Mr. Mackey asked about the welds and Mr. Ormond clarified that they are visually inspected.

The low activity TRU facility (LATF) will be part of E-area burial grounds operations. An existing facility is going to be modified instead of building something from the ground up. Mr. Riley expressed concern with anything being disturbed that is already buried there. Mr. Ormond assured the group that nothing already buried will be disturbed.

Mr. Ormond continued. The building that is currently there, 643-43E, is going to be modified. Presently, mixed waste is stored there. The new building is corrugated steel with a chain link fence around the bottom. The \$5M required from SR to modify this facility includes all project

management costs, design and construction work.

Mr. Mackey asked about funding. Mr. Ormond indicated that right now, the project is funded on the priority list on the '02 budget. This project is very close to the line between a General Plant Project (GPP) project and a Line Item (LI). SRS is waiting for final confirmation as a GP Project. If it is determined that this project should be classified as a line item, then the project will be set back at least six months. If the funding is reduced, the project will be delayed probably a year. Headquarters favors the GPP approach.

Mr. Ormond told the group that the HandSS-55 has a certain height requirement and the existing building didn't accommodate it. However, it was still more cost effective to modify the building instead of building new one. Another reason this building was selected for modification was that the pad already has a RCRA permit. It is easier to modify a permit instead of getting a new one.

The HandSS-55 assembly is in progress. SR is working closely with the development team to implement the integrated safety management system. SRS expects to commence operations in late 2004/early 2005. EM-50 is funding this building themselves. SR is building the infrastructure and has promised to demonstrate it.

Mr. Poe asked what the site would do if this project did not materialize. Mr. Ormond responded that the Visual Exam (VE) facility would be used or the drums would be set aside until the high activity TRU facility opened in 2015. This facility will help SR understand and build the high activity TRU facility coming in 2015.

Salt Processing Update

Terry Spears, Director, Salt Processing Project Division, updated the group on the status of salt processing at SRS. He reviewed with the group that the ROD was published October 17, 2001, in which Caustic Side Solvent Extraction (CSSX) was chosen as the best alternative for processing cesium bearing salt waste. In parallel, DOE will evaluate near term alternatives for dealing with the SR waste. DOE chose a multi-pronged path and developed an acquisition strategy, which was approved by the Assistant Secretary for Environmental Management on November 2, 2001.

The Request for Proposals (RFP) was issued 12/5/01. The parallel salt strategy initial approach is to look for low curie salt to send directly to Saltstone (SS) without further processing. Also, DOE plans to develop in the near term a capability to remove alpha emitting radionuclides from the HLW, and then to disposition additional salt waste. Lastly, DOE hopes to disposition high curie salt waste by removing cesium in a CSSX salt waste processing facility (SWPF). The cesium fraction of the waste will be processed in the Defense Waste Processing facility (DWPF), and the low-level fraction will be processed in SS.

Mr. Spears illustrated the HLW disposition process with a slide that put the three parallel options in a systems diagram to show how they fit into the HLW system. Right now, SR is processing sludge waste to DWPF. SR is also evaluating an option to process salt waste that meets the requirements for dispositioning directly to SS, thereby freeing up tank space.

Also, SR is looking into developing an alpha removal capability that in the systems view of things would fit in after the waste removal where the salt waste would be processed there first and the alpha emitting radionuclides removed. In the future, SR is looking at processing high curie salt waste in the SWPF that has been decontaminated of the alpha components, with

those alpha components being dispositioned to DWPF. In the near term, SR is finding a way to disposition low curie salt waste directly to SS.

Mr. McDonell questioned the line at the top of the diagram illustrating waste going directly to DWPF. Mr. Spears explained that SR is looking at ways to clear up the tank farms and reduce volumes stored there by finding ways waste could go directly to appropriate disposition pathways without being stored in the tank farms.

Mr. Spears next explained each of the paths SR is evaluating. Low curie salt disposal is an alternative that would identify the salt that would have low activity appropriate for dispositioning directly to SS. There is funding in the 2002 Operational Plan to start up SS. There are 900K gallons of supernate stored in Tank 50. The fact that SR has a plan to process additional salt materials to SS maximizes the return of our investment to start up the facility.

Mr. McDonell asked, concerning plutonium and strontium, how SR identifies the components of salt in the waste tanks that need to be removed? SR has an extensive waste characterization data-base and historical record of processing and believes that some waste is amenable to direct processing without that alpha removal step. Additional waste may also be amenable to processing to SS following alpha removal. SR is focusing on seven to fourteen tanks as targets for this direct processing.

Mr. Poe asked for a judgement on how much waste could fore-go the alpha removal, how much could fore-go the cesium removal, etc. Mr. Carter estimated 15-20% as a high-end estimate and added that it would be worth the monetary investment to determine if SR could be successful in these endeavors.

This work is being performed by WSRC under a Performance Based Incentive. The analysis, the establishment of a plan, and the processing of 1M gallons of saltcake by end of 2005 are all incentivized work.

Mr. McDonell asked about the economic feasibility of the disposition of the waste to SS. Mr. Spears answered that WSRC is currently developing a Waste Incidental to Reprocessing (WIR) evaluation that will make the case that for some fraction of the waste, it is much more economical to process the waste directly to SS. If that determination can't be made, then that is a "showstopper". He added the performance requirements of the SS facility must be met as well.

Mr. Spears continued with the status of the low curie salt disposal. The preliminary planning is underway, WSRC is identifying the high potential tanks for low curie salt feed, and SR is developing the WIR for delivery to DOE by the end of December.

Mr. Spears anticipates having an analysis of the WIR document by the end of January. Assuming approval of the WIR, WSRC can consult with the regulators. Then, by spring, (March), WSRC will have a technical plan in place to process the first 100K gallons of salt waste.

Mr. Poe questioned the direct disposal of salt and the coverage under the NEPA regulations. Mr. Poe doesn't believe that the direct disposal as being discussed now was covered in the Salt Processing Environmental Impact Statement (EIS). He cautioned WSRC to monitor this closely so that the option can go through with no problems. Mr. Spears believes direct disposal is likely to be bounded by one of the options analyzed in the EIS; thereby providing coverage on this basis, but this will be reviewed as part of the detailed planning for low curie salt.

Mr. McDonnell questioned the Class of the SS waste and DHEC's role. It is a Class A waste. Notification must be made to DHEC with a discussion of the requirements.

Mr. McLeod questioned the NRC's role, which is more of a consulting role. Mr. Poe suggested that the new WM chair add a briefing on disposal of salt to the March/April WM and/or CAB meeting. Mr. Waters agreed and added these topics are incidental to tank space management and will be followed by the WM Committee and CAB.

Mr. Spears continued with the Alpha removal capability. WSRC will develop the capability for removing the actinides (primarily uranium and plutonium) and strontium. DOE's goal is to use existing facilities and equipment, (possibly the old ITP facilities and/or additional tank space). The baseline technology is sorption using monosodium titanate (MST) and crossflow filtration. This allows for additional disposition to SS and/or feed to SWPF.

Ms. Patterson added that as taxpayers we don't have to have the ultimate best way, just one that works. Mr. Holcomb cautioned against plutonium polymers and asked that WSRC be especially mindful of these. He also questioned WSRC's sampling strategies. Mr. Poe asked about a funding requirement for alpha removal, to which Mr. Spears responded a round number, initial investment would probably be \$20-60M, based on the range of options being developed at present.

Mr. Spears continued by explaining cesium removal. The CSSX SWPF would be the primary means for cesium removal for high curie salt waste. DOE plans to pursue a small-scale facility to meet the pilot test objectives and provide for continuing processing capability. The size of the facility is yet to be determined. Continuous evaluation of the HLW system and the pilot test data will help determine what additional processing capabilities may be needed in the future.

Mr. Spears continued with a RFP discussion. The RFP was issued December 5, 2001. It looks for two Engineering, Procurement, and Construction (EPC) contractors to enter into a contract with the government to deliver a variety of things. DOE is looking for a conceptual design at a 15% (~900K gal/year) scale facility. This gives us a basis for comparisons. In addition, we are asking that they provide a cost and schedule sensitivity analysis for 1%, 5%, 10%, and a 20% scale. Then we can identify an optimal sized facility. Phase 2 would include the preliminary design, final design, construction, and commissioning of the SWPF. The down select to one EPC contractor will be upon completion of conceptual design for the optimum facility.

AmCm Paper

Mr. Waters then read a briefing that he had written on the AM/Cm project to date.

Public Comment

There were no public comments

Wade Waters adjourned the meeting at 8:30 p.m.

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