



SRS Citizens Advisory Board

Waste Management Committee

Meeting Summary

August 22, 2000
USC-Aiken
Aiken, SC

The Waste Management Committee (WMC) met on Tuesday, August 22, 2000, at 12:30 p.m., at USC-Aiken, Aiken, SC. Attendance was as follows:

CAB Members

Wade Waters*
William Lawrence*
Bill Willoughby*
Charleen Townsend
Perry Holcomb*
Mel Galin
Murray Riley
Karen Patterson*
Lola Richardson**

Stakeholders

Rick McLeod
Ed Wannomacher
Lynn Waishwell
Bill McDonell
Lee Poe
Richard Herold
Bill Lawless
Mike French

DOE/Contractors

de'Lisa Bratcher, DOE
John Reynolds, DOE
Larry Ling, DOE
Ray Hannah, DOE
Dale Ormond, DOE
Brent Daugherty, BSRI
Bob Hinds, WSRC
Sonny Goldston, WSRC
Kelly Way, WSRC
Helen Villasor, WSRC

Rebecca Gaston-Dawson**

Regulators

Keith Collinsworth, SCDHEC
None, EPA

*Denotes committee member
**Denotes absent committee member

Wade Waters opened the meeting promptly at 12:30 p.m. by inviting introductions and thanking everyone for coming.

Transuranic (TRU) Waste Update:

Dale Ormond opened his presentation by noting that since the last TRU program update to the Citizens Advisory Board (CAB), the New Mexico Environment Department (NMED) had made changes to the WIPP Resource Conservation and Recovery Act (RCRA) Permit. The changes required SRS to start over and rewrite four quality assurance (QA) documents that describe how SRS will implement all of the (WIPP) requirements for characterizing, certifying, and shipping TRU waste to WIPP for disposal. These QA documents were completed and have been approved.

Mr. Ormond said another new development in the TRU program is the completion of the SRS Visual Exam Facility. This facility will be used to open, inspect and verify the contents of some TRU waste prior to disposal in WIPP. Using photographs to explain the visual exam process, Mr. Ormond showed how TRU drums are front loaded into glove boxes, while inspectors use glove boxes on the opposite side to inspect the contents. The Westinghouse Savannah River Company (WSRC) startup Readiness

Assessment and the DOE-SR Validation Review have been completed and WSRC is in the process of closing out findings. Mr. Ormond said that "hot" operations are expected to commence in October, with waste characterization activities scheduled to begin August 31, 2000. The characterization activities will include radiography; radio-assay; headspace gas sampling and analysis; and drum content visual examination.

Perry Holcomb raised the question of the TRU waste alpha content since alpha is difficult to measure in solid waste. Mr. Holcomb asked how SRS intends to verify the alpha of each drum. Mr. Ormond said that Westinghouse Savannah River Company (WSRC) is developing "acceptable knowledge" packages that contain additional details of the waste SRS sends to WIPP.

Mr. Ormond closed his presentation by providing an updated TRU program schedule.

The Carlsbad Area Office audit team, which will consist of approximately 45 people, including State of New Mexico regulators, the Environmental Protection Agency (EPA), representatives from the different states along the transportation route, etc., have scheduled an audit at SRS from December 5 through December 14, 2000. Certification is expected by February 7, 2001 and the first TRU shipment to WIPP will be made by May 7, 2001. Four additional TRU waste shipments are scheduled for 2001, with 12 shipments scheduled in 2002.

Issues: None.

Actions: None.

Mound Transuranic (TRU) Waste:

Dale Ormond began his presentation by referencing CAB Recommendation 47, "Environmental Management Integration and Some SRS Specific Recommendations". In this document, the CAB recommended that SRS accept small amounts of Pu-238 wastes from other DOE sites for treatment prior to shipment to WIPP, provided that a definite schedule for treatment and shipment to WIPP is established. Mr. Ormond explained that the Mound site (located in the city of Miamisburg, Ohio) is scheduled for closure in 2004 and DOE must relocate approximately 150 cubic meters of Mound Pu-238 waste to another DOE site for interim storage, preferably SRS. The waste consists of 35 boxes of various sizes and 150 drums. There is also the potential to generate another 150 cubic meters through Mound's decontamination and decommissioning (D&D) activities.

Because the Mound waste does not meet repackaging requirements, it cannot be shipped directly to WIPP. However, Mr. Ormond emphasized that before any of the Mound waste comes to SRS, all of SRS's Pu-239 waste, which is twice the volume of Mound's Pu-238 waste for transfer to SRS, will be shipped to WIPP. Mr. Ormond said that DOE is currently discussing equity options on transferring the waste with the state of South Carolina since the Mound exemption for the ATMX railcar expires in May 2002. Mr. Ormond said that if the Mound waste is not shipped by 2002, the exemption will not be extended and Mound would have to keep the waste. Mr. Ormond emphasized it would cost a lot of money to keep the waste at Mound and with fixed budgets within DOE, taxpayer dollars could be saved by sending the waste to SRS. In response to a query by Mr. Keith Collinsworth of the South Carolina Department of Health and Environmental Control (SCDHEC) about the current TRU waste inventories, Mr. Ormond said that SRS currently has 11,000 cubic meters of TRU waste, 5,000 cubic meters of Pu-238 and 6,000 cubic meters of Pu-239.

Lee Poe said that he would oppose Mound's waste coming to SRS because of the perception that trading equal volumes of Pu-238 for Pu-239 is unfair and previous experience with Mound scrap sent to SRS turned out to be different than what appeared on the shipping manifest. In the latter case, materials presented a safety hazard to SRS operators when they were required to handle the scrap. In the former case, trading shippable Pu-239 TRU for Pu-238 that is not shippable to WIPP is unequitable.

Mr. Ormond explained that SRS already had in storage TRU waste that had come originally from Mound and that it contained materials from previous Mound missions including the construction of Radio-Thermoelectric Generators (space batteries). Additionally, Mr. Ormond said that SRS is scheduled to construct a new facility in 2010 that will have capability to process all of DOE's Pu-238 waste since SRS already has the largest inventory of Pu-238 waste in the DOE complex. When asked why a facility would take so long to construct, Mr. Ormond said that it takes time to get a project of this size (approximately \$350 million) through the appropriate systems, including negotiating with SCDHEC for the permits as well as completing research and development projects to support facility design. In terms of lifecycle costs, Mr. Ormond said the SRS TRU program is estimated to cost approximately \$1.3 billion over the next 30 years.

Issues: The WMC would like to hear more about where and how SRS intends to store the Mound waste, if the storage would be safe, how Mound intends to package the waste for shipping to SRS, and if Mound can certify what the waste contains.

Actions: Rick McLeod, the CAB technical advisor is to begin development of a draft motion on the Mound waste coming to SRS. Mr. Ormond is invited to present additional information to the WMC on shipping the Mound waste to SRS at its September 11, 2000 meeting.

Alternative Treatment Technology for Pu-238 Waste Forms:

In his presentation, Brent Daugherty introduced what he termed a "back-up" plan' i.e., technology that can be applied to shipping TRU waste in the event problems develop with the TRUPACT-II, the current approved transportation method. In defining the problem, Mr. Daugherty said that high activity Pu-238 waste generates hydrogen gas through the radiolysis of organic material. The current TRUPACT-II licensing requirement limits hydrogen concentration in the smallest waste container to less than 5 percent. Under Revision 18 of the TRUPACT-II Safety Analysis Report (SAR), using filtered bags, the maximum Pu-238 loading is .1708 grams per drum.

Mr. Daugherty referenced his earlier presentation to the WMC on March 9, 2000 where transportation enhancements such as improved filters and hydrogen getters were discussed. The discussion also focused on two SAR revision submittals to the Nuclear Regulatory Commission (NRC). In Revision 19, which was submitted to the NRC in March 2000, a change was proposed to improve filters to five times the diffusivity of the old filters. The NRC decision on Revision 19 is expected in December or January. Revision 20, scheduled for submittal in February 2001, would allow hydrogen getters to be placed in the headspace of the TRUPACT-II. If approved, both of these revisions would increase gram loading from a conservative matrix depletion calculation of .9 grams to 5.9 grams per drum and allow for shipping 96 percent of SRS's TRU waste.

Mr. Daugherty also noted two alternatives to the transportation enhancements, the destruction of organics through oxidation and reduction technologies, and the decontamination of organics. A decontamination factor of 100 allows for drum loading to meet TRUPACT-II wattage limits.

In the development of alternative treatment technologies, the primary objective is to reduce or eliminate the generation of hydrogen as a result of radiolysis. Secondary objectives include minimizing pretreatment (no shredding or size-reducing the waste) or minimizing offgas (eliminating fluorides, etc.).

Mr. Daugherty discussed the current funding level (\$1.6 million) for this technology development, which is being shared by the Mixed Waste Focus Area (MWFA), and the National Energy Technology Laboratory (NETL). The MWFA and NETL will also jointly fund an initial demonstration during the second quarter of 2001. The *Commerce Business Daily* announcement to vendors will be issued on August 28, 2000 and offers from the private sector are expected in December 2000. The conceptual design of a full-scale unit is forecasted for the third quarter of Fiscal Year 2001. Mr. Daugherty concluded his presentation by noting that by then, it will be known if the program will be needed or not, i.e., in terms of the transportation enhancements.

Lee Poe suggested that this technology initiative be coordinated with other SRS programs since he believes that knowledge is always gained through lessons learned. Mr. Poe also recommended that work on Revision 19 be stopped and move directly to Revision 20. Mr. Poe suggested placing more emphasis on the NRC to certify shipping containers that allow more Pu-239 to be shipped. In addition, Mr. Poe said the NRC should be involved in the getter process. Mr. Daugherty acknowledged Mr. Poe's comments and said that currently the NRC has a limited staff; however, he feels strongly that given the importance of the TRU program, they are making a concerted effort to approve the recommended changes in the SAR revisions.

Issues: The destruction of organics via reduction, which also could reduce at least some of the oxide (less soluble) to the metal (more soluble) form, may be a regulatory concern.

Actions: After receipt of the proposals from the private sector in December, Mr. Daugherty was asked to come back and update the WMC and members of the public.

Glass Waste Storage Building (GWSB) Environmental Assessment (EA):

Wade Waters announced that the presentation on the GWSB EA scheduled to be presented by Soni Blanco has been postponed to another date. Ms. Blanco had informed Mr. Waters that no new information has been received on the status of the EA.

Salt Team Focus Group Update:

In providing an update from the Salt Team Focus Group, Lee Poe said he agreed with Ernie Chaput, another member of the team, who said that the Focus Group believes that Salt Processing and the High Level Waste (HLW) Tank Closure to be the most important activities at SRS. Mr. Poe noted the key issues that include the Salt Processing Technology decision which is expected in June 2001. Mr. Poe said that the Draft EIS, expected to be released in November 2000 will have no preferred alternative and the focus group has been told that the Final EIS will have a preferred alternative. Mr. Poe assured the group that the focus group is attempting to stay current with HLW programs that affect HLW solidification and tank closure.

Referencing a briefing the focus group received from Mark Mahoney on July 18, 2000, Mr. Poe spoke about the HLW System Plan that integrates and optimizes all activities of the HLW program. The plan is a planning document that defines system priorities (risk reduction, regulatory drivers, etc.); key activities and dates; operating plan,; and programmatic, technical, and cost uncertainties. Mr. Poe emphasized that the System Plan is both a WSRC and DOE document, prepared and authorized by both organizations. Mr. Poe called out two alternatives identified in the plan, which are "Requirements Case" (250 canisters per year) and "Target Case" (225 until 2010 when HLW will begin recovery of salt waste).

Mr. Poe then referenced a briefing from John Reynolds to the focus group on July 18, 2000. Mr. Reynolds presented the focus group with a DOE Contingency Decision Tree that shows the possible alternatives for HLW; defining time that would be required to implement alternatives if necessary, i.e., reuse the old HLW tanks for reuse (2 – 3 years), or build new tanks under different regulations (RCRA – 5 years and Waste Water – 4 years). This decision tree also responds to CAB Recommendation 112 amended.

In closing Mr. Poe provided the focus group's conclusions on CAB Recommendation 112. They are as follows:

Recommendation 1 – Close since the System Plan contains all of the CAB issues

Recommendation 2 – Hold open until a decision is made in June 2001

Recommendation 3a – Close since the action has been met

Recommendation 3b – Hold open since the schedule for preparation of the SEIS is not available

Recommendation 3c – Hold open since risk and alternative concerns have not yet been met

Recommendation 3d and 3e amended – Close because this requirement has been met with the presentation of the decision logic including time required for implementation of alternative actions (i.e., reuse of old tanks or construction of new tanks) coupled with frequent updates of the System Plan

Wade Waters thanked Mr. Poe for the focus group's continued support of the Salt Processing issue and requested that Mr. Poe continue to provide updates to the WMC as necessary.

Other Business:

While the topic of the Release of Surplus and Scrap Materials was not an agenda item for this meeting, Wade Waters asked Sonny Goldston to brief the WMC on the status of this emerging issue. Mr. Goldston said that a few months ago, Secretary of Energy Richardson issued a moratorium on recyclable materials that could be contaminated and asked a team to develop guidance on the release of these materials. Mr. Goldston noted that at this time little information is available for discussion; however, the policy group is preparing a document that will be released for a 60-day public comment period in September. Mr. Goldston added that the decontamination and decommissioning materials or scrap metals to be released are being investigated to determine if they can be reused in the DOE complex and if so what type of a facility would be required to process the materials. It was noted that a Special Notice seeking expressions of interest to provide an electric powered metal melt production furnace to DOE had appeared in the August 23, 2000 issue of the *Commerce Business Daily*. Mr. Goldston said that by September 11, 2000, the date for the next WMC meeting, more information would be available to brief the committee.

Issues: None.

Actions: Mr. Goldston was asked to provide a briefing on the release of surplus and scrap materials at the next WMC meeting on September 11, 2000.

Consolidated Incineration Facility Focus Group Update:

Bill Lawless, technical lead for the focus group began his update by noting that DOE is to provide the focus group with the following:

- Costs of new non-thermal facility April 1, 2001
- Research data on other incinerators have been shut down and restarted
- Comparisons of operating costs versus shutdown costs

Mr. Lawless then reviewed DOE's response to Cab Recommendation 126, "Path Forward for the Consolidated Incineration Facility" where DOE said its decision to suspend CIF operations was based on:

- Current cost effectiveness of treatment at CIF
- Lack of waste feed material
- Site Treatment Plan (STP) commitments
- Need to fund higher priority programs (i.e., DNFSB 94-1)

With regard to DOE's decision, Mr. Lawless said that the citizens have not accepted DOE's response yet. It is the belief of some of the group members that cost effectiveness has little or no bearing on the decision since the numbers that have been provided to date would appear not to make any difference. In terms of the lack of waste feed material, Mr. Lawless said the focus group was in disagreement on this as well because DOE can keep CIF running around the clock to incinerate its legacy PUREX waste. Referring to the STP commitments, Mr. Lawless clarified that this commitment relates specifically to legacy waste and not any of the newly generated waste. As to the need to fund higher priority items, Mr. Lawless said that is the opinion of several focus group members that funding is not the real issue, instead they believe DOE is moving to shut down incineration across the DOE complex.

Referring to the DOE response letter to Recommendation 126, Mr. Lawless also said that the DOE Incineration Alternatives Team will continue exploring PUREX alternative treatment and optimization technologies and will pursue commercial treatment options with a goal of lowering treatment costs. However, it was noted that no reference was made in DOE's response letter as to the ongoing discussions with SCDHEC on the permitting issue.

Given that DOE has no alternative to incineration at this time, Mr. Lawless asked if there was an option to optimize CIF now and operate the facility until the permit, which has no fixed target expires. Noting that the permit requirements could change, Mr. Lawless expressed a concern that SRS could eventually be led into a lawsuit.

Mr. Lawless said that future CIF Focus Group meetings are scheduled for September and October 30, 2000. In response to CAB and Focus Group requests, Helen Belencan, DOE-HQ will make a presentation on the HQ team study on alternative technologies to incineration at the September 27 meeting. Carol Cooley, DOE-HQ has been invited to participate at an upcoming focus group meeting. The National Research Defense Council (NRDC) has also been invited to provide a presentation on its position of incineration at the November or December meeting. Mr. Lawless said the NRDC is considering the invitation.

In closing, Mr. Lawless said that a large number of citizens do not agree to DOE's decision to suspend CIF operations, and through Recommendation 126, the CAB and the CIF Focus Group did the right thing by asking DOE to reconsider its decision.

Public Comment:

There were no public comments.

Wade Waters adjourned the meeting at 3:30 p.m.

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