



SRS Citizens Advisory Board

Environmental Remediation & Waste Management Subcommittee

Meeting Summary

April 2, 1997

Augusta, GA

The CAB ER & WM subcommittee met on April 2, 1997 at the Ramada Plaza Hotel in Augusta, GA. Bill Lawless opened the meeting with introductions. Deborah Simone, Subcommittee member, was present. Walt Joseph, CAB facilitator, and Todd Crawford, CAB technical support, also attended. Attending from DOE were Dale Ormond, Ray Hannah, Timothy Henderson, John Reynolds, and Larry Ling. P. Brent Allen attended from the South Carolina Department of Health and Environmental Control (SCDHEC). Attending from WSRC/BNFL were James McConathy, Joseph D`Amelio, Gerry Stejskal, Mary Flora, Anne Roe, Bruce Lawrence, David Herman, Steve Crook, Peter Hudson, W. T. Goldston, Brent Daugherty and Helen Villasor. Public attendees included Lee Poe, William R. McDonnell, Patricia Hudson, Sybil Cook, R. D. Tyson, Jr., Patricia McCracken, Dale Kemp, DeWayne Walker, and Bob Newman. de`Lisa Bratcher attended as the Associate Designated Deputy Federal Official (ADDFO).

Bill Lawless welcomed the attendees and then introduced Jim McConathy, WSRC, who gave an overview of the SRS Site Treatment Plan (STP) (See attachment.) Mr. McConathy explained that the STP was negotiated with SCDHEC to meet a congressional requirement that the Department of Energy determine the types of mixed waste and the disposition plans for these wastes at each of its sites. Mr. McConathy went on to explain the various mixed waste streams contained within the STP, the amounts of each, as well as the treatment plans for each. Mr. McConathy noted the STP is currently being revised through the annual update to incorporate several additional waste streams not included in the original STP. This revision will be completed with SCDHEC approval. The annual update of the STP is expected to be available in May.

Mr. McConathy presented examples of mixed waste treatment facilities such as F&H Effluent Treatment Facility (ETF), Defense Waste Processing Facility (DWPF), M-Area Vendor Treatment Facility (operated by Duratek) and the Consolidated Incineration Facility (CIF). Mr. McConathy indicated that SRS may utilize treatment methods at other DOE facilities with approval from SCDHEC.

Mr. McConathy addressed current STP issues including highly radioactive silver-coated packing material that requires specialized storage casks, tritiated water with mercury, which is macroencapsulated in a stainless steel container called Òfat boyÓ, and establishing sample and analytical procedures for hard to characterize hazardous wastes. Future STP issues include discovering alternative technologies to remove tritium from waste oil prior to treatment and

treating the oil without releasing the tritium, studying alternatives in the commercial sector where vendor and commercial treatment facilities could provide safe and less costly treatment options, and dealing with funding issues.

In response to Lee Poe's concern about the amount of waste that has been processed and the duration of its storage, Mr. McConathy explained that about 100 cubic meters of waste has been processed and that waste will continue to be managed over the next fifty years. Mr. Poe made reference to a specific term (detoxify) and if some waste cannot be detoxified, how can it be removed. Mr. McConathy confirmed that detoxify is not an inaccurate statement; however, it is not a regulatory term. Mr. McConathy also explained that the current treatment methodology is stabilization, which prevents releases to the environment.

Bill Lawless asked if low-level waste is being treated at SRS or being shipped offsite. Mr. W.T. Goldston indicated that SRS has a low-level waste disposal facility, i.e., the E-Area Vaults and slit trenches at the Burial Ground Complex. Mr. Goldston also said that SRS ships low-level waste to SEG for compaction as well.

Mr. Poe asked if there are no disposal plans at SRS, will the material be delisted or go somewhere else. Mr. McConathy responded that some of the waste could be delisted but most will be disposed of in permitted Resource Conservation Recovery Act (RCRA) facilities offsite. Mr. Poe requested a record of the regulatory authorization and a history of the STP. Bill Lawless requested copies of Mr. McConathy's additional slides and a copy of the STP update. (See attachments.)

Bill Lawless then introduced Brent Daugherty of British Nuclear Fuels, Limited (BNFL), Solid Waste Division, who gave a presentation on Environmental Management (EM) Integration. (See attachments.) The EM Integration initiative resulted from Al Alm's request to examine waste management on a complex-wide basis to determine how it can be managed cheaper, faster, and better. Questions asked in the evaluation include (1) What type waste and how much is at each site?, (2) What existing treatment facilities do we have at each site? and (3) What is the capacity of those treatment facilities? The EM Integration effort is an opportunity to improve the Ten Year Plan objectives. The charter for the EM Integration is to identify opportunities in implementing DOE-EM's 10-Year vision through a complex-wide integration effort which will reduce program costs and risks. The system engineering effort will build on and augment previous analyses and data bases. The project will be an integrated corporate (contractor led) effort that will focus on the most important waste streams, materials, and treatment facilities, transportation systems, storage and disposal facilities, as well as technology insertions. Transuranic and mixed low-level waste will be the first waste streams examined under the integration approach.

The EM Integration effort may result in a waste consolidation at several sites. This consolidation brings up state equity issues, that is, is it fair to expect a few states to accept all of the risk associated with receiving the wastes. Mr. Daugherty pointed out that the keys to implementing the EM Integration effort were strong public support, state equity issues, and regulatory flexibility.

Mr. Daugherty concluded his presentation by discussing the current status of EM Integration and the continued support of stakeholders to determine the right set of opportunities.

Lee Poe commented that if there is a wait for DOE-HQ to put the plan together, reasonable consideration needs to be provided by stakeholder groups which in turn should be fed back into the DOE-HQ plan. He suggested that EM Integration could help the Ten-Year Plan since the public needs to provide meaningful input, but asked how SRS plans to involve stakeholders. Mr. Daugherty explained that at a minimum, continued public involvement is necessary in the Ten-Year Plan process. In response to William McDonnell's question if there is an interim plan, Mr. Daugherty said that so far there has been no response from the DOE-HQ Steering Committee. However, the committee has looked at each presentation (SRS played into it) and minutes were taken.

Todd Crawford asked if EM Integration included the STP and was advised that it aligns with the STP. In response to Mr. Crawford's question concerning regulatory flexibilities, the response indicated there were some opportunities because some sites have small amounts of waste (50 to 100 m³).

Bill Lawless expressed a concern that the plan is too abstract and asked "When are you going to do it?" since time and money are running out. Mr. Daugherty hoped that in the response from the Executive Steering Committee, they would work with stakeholders at all levels and would integrate the information they received into the Ten Year Plan. A list of opportunities was put into the March 10 submission and Mr. Daugherty commented that he believes DOE-HQ will issue plans for all sites in the DOE complex.

Bill Lawless concluded the discussion by adding that EM Integration is an urgent matter; however, it needs to be more concrete. Bill Lawless suggested the CAB revisit the issue at a future subcommittee meeting.

Bill Lawless then introduced Dale Ormond, DOE-SR, who presented an update of the Russian Hybrid Melter, the suggested technology of choice for thermal treatment. The main use of the system would be to treat materials which are too high in activity or gas generation for shipment to the Waste Isolation Pilot Plant (WIPP). Developed by Russia for plutonium (Pu) waste treatment, the modular component design of the melter allows for easy repair or replacement. The unit is small enough to fit into existing facilities and could handle SRS drummed Pu-238 and Pu-mixed transuranic wastes. Mr. Ormond explained there are no concerns about corrosion in the melter crucible and a complete separation of metal and glass and the confined casting of the metal phase eliminates the usual fumes and hazards associated with molten metal pouring. Mr. Ormond noted the Russian Melter treats radionuclides and traces of Pu-239 by heating to 1500 degrees C.

Mr. Ormond discussed the proposal for funding being prepared by the Savannah River Technology Center (SRTC) and that DOE and BNFL will be sending a joint letter endorsing the project. Mr. Ormond showed a picture of a similar melter located at the Georgia Institute of Technology (GATech) in Atlanta, GA and explained there has been much positive feedback on

that unit. While Mr. Ormond explained there has been no new progress with the GA Tech demonstration, the need for a demonstration still exists.

Mr. Bob Newman discussed other forms of incineration and asked what melter has been shut down at SRS. Mr. Ormond responded that the M-Area Vendor Treatment Facility operated by Duratek has been shut down.

Mr. William McDonnell asked about WIPP's acceptance standards, the option of repackaging waste, and transportation issues. Mr. Ormond commented on the need to repackage the waste to distribute curies loading; Westinghouse Savannah River Company (WSRC) will control the amount of curies in each shipment by measuring the number of grams of Pu238. Mr. Ormond then said that transportation rules need to be solved. Bill Lawless commented that the transportation route is preferable to the incineration route and agreed that transportation rules need to be solved. Bill Lawless then concluded the discussion by suggesting the CAB support the Russian Melter at a future date.

Bill Lawless introduced Mr. John Reynolds, DOE-SR, who presented an update on the Consolidated Incineration Facility (CIF), designed to treat and reduce the volume of certain incinerable hazardous, low-level radioactive and mixed (both hazardous and radioactive) wastes. The CIF RCRA permit allows only SRS-generated wastes to be treated in the CIF. The majority of these wastes will be trucked to the facility from on-site generators.

Mr. Reynolds discussed the historical profile of the facility beginning with the initial design in 1986 to the trial burn completed in April 1997. (See attachment.) Mr. Reynolds noted that SCDHEC is establishing standards that will be included in the RCRA permit; however, radioactive operations can be started while the final permit conditions are being finalized.

Bill Lawless asked when the permit was expected and it was explained that it would take from four to six months to process; however, CIF is on track to meet the STP milestone.

Based on the current Ten-Year Plan, Mr. Lee Poe expressed a concern about CIF funding and whether that funding will support radioactive operations. The issue is why start up and contaminate a facility if there is no funding to support operations. Mr. Reynolds explained that DOE-SR believes funding to operate the facility will exist and is looking at options to ensure CIF will be viable. Mr. Reynolds also mentioned that one of the options under consideration is privatization of CIF.

Mr. William McDonnell expressed an opinion that CIF must be operated in order to rid the site of the benzene produced by DWPF. Ms. Patricia McCracken asked if SRS would be using existing on-site monitoring of CIF. Mr. Reynolds explained that since different levels of monitoring are required for CIF sophisticated laboratory analyses need to be performed, and currently SRS has no on-site capability for this process.

To conclude the CIF update, the CIF video was shown to the attendees.

Bill Lawless introduced Mr. Larry Ling, DOE-SR, who provided an update on Tank 20 Closure. (See attachment). Currently, 1013 gallons of residual waste remain in Tank 20. Grout will displace the remaining sludge in the tank using a matrix pattern. Tank 20 Closure is expected to begin by April 21, 1997 and Mr. Ling noted that Secretary of Energy Pena has been invited to commemorate the event. Mr. Ling also reported that Tank 17 is being closed concurrently with Tank 20. Tank 17 has a 2' sludge heel remaining (about 7000 gallons) and the sludge removal is scheduled to begin April 8, 1997. After final waste removal activities, an expected 700 gallons of residual waste will remain in Tank 17. The tanks will then be filled with special-formulated concrete developed by CTL, Inc. in Chicago. Throop Company of California is providing the material for the grout contract on site.

Mr. Ling passed out photographs taken of the sludge and grouting process, which was demonstrated in a 24-foot diameter plastic pool. Mr. Ling also reported that a test pour has been satisfactorily completed and that core samples are being analyzed. While attendees viewed the photographs, Mr. Ling responded to questions concerning the possibility of cracks in the tanks and if they can be repaired. Mr. Ling explained that cracks in tanks could not be repaired; however, there have been no reports of any leakage at the tanks now and that tank leaks below ground are unlikely.

Bill Lawless asked if the Closure Plans for Tanks 17 and 20 are available and indicated he would like a copy of each. Mr. Brent Allen of SCDHEC also requested a copy of the Tank 17 Closure Plan as well as the 1997 Site Treatment Plan.

In response to Ms. Patricia McCracken's question concerning the bid process for the grouting contract, Mr. Ling noted that 42 contractors were invited to participate in the proposal and three companies placed bids. Ms. McCracken asked to be provided with the name of the chosen contractor, the grout formula, and sample results.

Bill Lawless noted to the attendees that there is a current CAB independent scientific peer review being performed on the tank closures.

Bill Lawless closed the meeting at 8:45 p.m. and thanked those attending.

Meeting handouts may be obtained by calling the SRS CAB toll free number at 1-800-249-8155.