



SRS Citizen's Advisory Board

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Waste Management Committee Meeting

**North Augusta Community Center, N. Augusta, SC
November 1, 2005**

The Savannah River Site (SRS) Citizens Advisory Board (CAB) Waste Management Committee (WMC) met on Tuesday, November 1, 2005, 5:00 PM, at the North Augusta Community Center, N. Augusta, SC. The purpose of this meeting was to discuss the Defense Waste Processing Facility/Salt Waste Processing Facility/Interim Salt Processing/Plutonium Vitrification Link; Scrap Metal; National Policy on Alpha Waste; Nuclear Regulatory Commission (NRC)/National Academy of Science (NAS)/Salt Waste Determination/ Tank Closure Determination Status and to hear public comment. Attendance was as follows:

CAB Members

- Bob Meisenheimer
- Manuel Bettencourt
- Joe Ortaldo
- Bill Willoughby
Perry Holcomb
Leon Chavous
Wendell Lyon
Bill Lawless

Stakeholders

J. R. Winarchick
Sam Booher
Bill McDonell
Cy Banick
Barbara Zmijewski
Charlie Hansen
Lee Poe
Bobbie Paul
Dianne Valentin
Cynthia Gilliard
John Contardi, DNFSB

*Rick McLeod

DOE/Contractors

Doug Hintze, DOE
Steve Mackmull, DOE
David Hoel, DOE
Greg Johnson, DOE
Diana Hannah, DOE
Nick Delaplane, DOE
Ginger Dickert, WSRC
Ed McNamee, BSRI
Mark Phifer, WSRC
David Hobbs, WSRC
Colin Austin, BNFL
Joe Carter, WSRC
Jim Cook, WSRC
Jim Moore, WSRC

Regulators

Turpin Ballard, EPA

- *WM committee members* * *CAB technical advisor*

Note: Cassandra Henry and Karen Patterson are CAB members of the WMC, but were unable to attend this session.

Welcome and Introduction:

Bob Meisenheimer, Chair, reviewed the agenda and then asked everyone to introduce themselves. He emphasized the need to keep the meeting on track due to the amount of items on the agenda.

Defense Waste Processing Facility/Salt Waste Processing Facility/Interim Salt Processing/Plutonium Vitrification Link:

Doug Hintze, DOE, explained that over the past several years the liquid tank waste operation has been reviewed in increments. This presentation is an attempt from a systems perspective to show how all the pieces tie together.

There are 51 storage tanks that contain 36 million gallons of legacy and newly generated waste. Salt waste amounts to 33 million gallons and sludge is 3 million gallons. Two of the tanks are closed.

The waste is sent through the three evaporators to condense the waste. The terms for the waste after evaporation are supernate (liquid) and salt cake (wet salt). Some of the material from the evaporators is moved to the Effluent Treatment Facility (ETF) and then released to the environment in keeping with the regulated permit limits. The salt cake is returned back to the tanks for eventual transfer to the Saltstone Treatment Facility.

The sludge, or high activity waste, from the tanks is moved to the Defense Waste Processing Facility (DWPF), mixed with glass and then stored in canisters in the Glass Waste Storage Facility (GWSF). The DWPF operation started in 1996 with 1995 canisters produced as of October 31, 2005. These canisters will be shipped to the federal repository at Yucca Mountain.

Until the Salt Waste Processing Facility (SWPF) is built, the plan is to utilize an interim process for seven million gallons. This process would include the Deliquification, Dissolution, and Adjustment (DDA) process. In addition, for two million gallons, the Actinide Removal Process (ARP) and Modular Caustic Side Solvent Extraction facility will be utilized. These processes will free up three tanks.

The SWPF, initially scheduled to start in 2009, will be delayed due to a forthcoming decision on the resolution of the new design modifications. The timing and cost are still being evaluated. The site is evaluating alternatives to reduce the schedule time and cost impact. The purpose of SWPF is to treat the balance of the waste in the tanks so the balance of the tanks can be closed.

Scrap Metal:

Steve Mackmull, DOE, explained that in January 2000, the Secretary of Energy established a moratorium on the unrestricted release of volumetrically contaminated materials (metal) into the commercial market. Volumetrically contaminated material is contaminated material inside the surface of the metal. In July 2000, the Secretary suspended the unrestricted release of scrap metal for recycling from radiological areas. In January 2001, the Secretary issued a directive to prepare a draft Scrap Metal Environmental Impact Statement (EIS) stating as a matter of record, that DOE's existing practices were protective of the public and the environment.

Volumetrically and radiological history metal is currently required to be sent to Subtitle D landfills. These are state of the art landfills as Three Rivers landfill with four feet of clay and a plastic liner under the waste, leachate collection pipes, methane collection, and other containment criteria. Metal from these landfills could be retrievable if necessary.

At this time, DOE Headquarters is actively considering publication of the draft EIS. Once a decision is made, it will be three to four months before the draft EIS is published. A public review and comment period would be scheduled.

National Policy on Alpha Waste:

Ed McNamee, Bechtel Savannah River, Inc. (BSRI), reviewed the background of the Old Radioactive Waste Burial Ground (ORWBG). The ORWBG is a 76-acre shallow land burial ground operated from 1952 through 1974. It contains 600,000 curies of radioactive material, 93 tons of hazardous substances and 22 underground Old Solvent Tanks (OSTs). Early burials were in the center of the ORWBG and later burials moved to the east and west ends and in more defined trenches.

In relation to alpha waste, alpha waste is distributed throughout the center of the ORWBG and documented locations in the east and west end. Plutonium (Pu)-239 from all alpha waste (less than 10 nanocuries/gram) represents approximately 0.2 percent of the total activity in the ORWBG. All alpha waste represents approximately three percent of the total activity in the ORWBG. The total volume of all alpha waste is estimated to be 31,000 cubic meters. Tests done in the 1980s determined that retrieval of any of the material would result in significant worker dose and would generate a large secondary waste stream.

A remedial decision was reached in 2002 through the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Record of Decision (ROD). Contaminated soil from four other units is being placed onto the ORWBG. Upon completion of the consolidation activities, an engineered cover system will be installed over the entire ORWBG, including the 22 OSTs. All units will be maintained under institutional control.

There is a remedy agreed to by DOE, the Environmental Protection Agency (EPA) and the South Carolina Department of Health and Environmental Control (SCDHEC) for the ORWBG that is currently being constructed and should be completed before the end of FY06.

Nuclear Regulatory Commission (NRC) /National Academy of Science (NAS) /Salt Waste Determination/Tank Closure Determination Status:

Doug Hintze, DOE, reviewed the status of the Salt Waste Determination (WD) document. The initial draft was sent to the NRC on February 28, 2005. NRC should have their technical report completed by November 18, 2005. This report will state if NRC agrees with DOE's opinion to treat and dispose the source term high-level waste as non-high-level waste. The current schedule has the Secretary of Energy signing the Salt WD around December 7, 2005. After approval, SCDHEC will consider granting a permit. A public review period is expected from December 22 to February 9, 2006. SCDHEC should sign the document by March 28, 2005. The preparations for the first batch going to DDA will be around May 6, 2006.

The Tank Closure WD was submitted to the NRC on October 3, 2005. There is a public comment period open until November 21, 2005. Mr. Hintze reviewed a very tentative schedule for completion of the Tank Closure WD. The schedule included a seven month delay compared to the Federal Facility Agreement milestone.

Rick McLeod reviewed the draft recommendation, Draft 3116 Determination Document for Closure of Tank 19 and Tank 18.

Public Comment:

Bob Meisenheimer stated that he planned on writing a letter to EPA Headquarters responding to the public comment period on the Yucca Mountain EPA revised standards. The letter would reiterate the message he gave at the public meeting in Washington. This letter would be from the CAB and support the revised standards. The letter will be ready and available for the CAB to approve at the November CAB meeting. The WMC agreed to this action and requested a copy of his comments.

Bobby Paul asked if the CAB has discussed Yucca Mountain and how the vote came out. Bob Meisenheimer said the CAB has addressed Yucca Mountain numerous times. He stated that there were five CAB recommendations on Yucca Mountain and while the CAB didn't approve the recommendations unanimously, they were supported by a majority of the CAB.

Ron Winarchick asked if the waste stream we were dealing with was commercial waste. Bill Lawless responded that the waste was all defense waste.

Dianne Valentin said she was not aware of the burial ground with caps. She asked if it was possible to put a protective layer underneath the burial ground. Bill Lawless said it was not possible. He said that the cap on the burial ground has the same affect. It keeps the rain water from getting to the material underneath. Bob Meisenheimer stated that it had been determined that such a protective layer would not be needed.

Bobby Paul said that she had read about a release of about 50 gallons of waste. What was that about? Doug Hintze said that the site had one case where one tank leaked 50 gallons to the environment. That was in the late 50's or early 60's. Mr. Hintze mentioned that tank 5 was recently rewetted in order to remove the waste. In this case, there was no visual observation of a leak but only a discoloration on the tank wall.

Bill Lawless presented a MOX groundbreaking hard hat to Lee Poe.

Adjourn:

Bob Meisenheimer adjourned the meeting.

Follow-Up Actions:

The following are the action items from the meeting:

- Before the meeting, Sam Booher requested a presentation on the Carolina Bays. He said it had been a while since the public has heard about this. - Paul Sauerborn

- Bob Meisenheimer requested that Doug Hintze return in the spring, or before, to give an update on the SWPF status - schedule and cost. - Doug Hintze, Jim Moore
- Bill Lawless requested that in the background of the ORWBG draft recommendation a note be made about the additional waste that would be generated by digging up the TRU waste buried there. - Rick McLeod
- Lee Poe requested that the fact that no evidence that Pu has moved from the ORWBG should be added to the draft ORWBG recommendation. Bob Meisenheimer suggested the following statement be added, "No evidence Pu transport is occurring or ever has occurred outside the ORWBG. - Rick McLeod
- Perry Holcomb suggested to change the title of the ORWBG draft recommendation to, "Potential Impact of Proposed National Policy on Buried Alpha Waste at SRS." - Rick McLeod
- Rick McLeod to add, "and create a large volume of waste." to the end of the sentence. - Rick McLeod
- Copy Lee Poe and Perry Holcomb on the draft ORWBG recommendation. - Jim Moore
- Lee Poe requested that the schedule for the Salt Waste and Tank Closure Determination Documents be put in writing. - Doug Hintze, Jim Moore
- The 3116 draft recommendation should be sent to the larger distribution. - Jim Moore
- Bob Meisenheimer will write a letter to EPA supporting the Yucca Mountain EPA revised standards. - Bob Meisenheimer, Dawn Haygood, Jim Moore