



SRS Citizen's Advisory Board

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Waste Management Committee Meeting

**North Augusta Community Center, N. Augusta, SC
April 19, 2005**

The Savannah River Site (SRS) Citizens Advisory Board (CAB) Waste Management Committee (WMC) met on Tuesday, April 19, 2005, 5:00 PM, at the North Augusta Community Center, N. Augusta, SC. The purpose of this meeting was to discuss the Salt Waste Determination Document, the Saltstone Performance Assessment, the National Academy of Science (NAS) Report discussion and to hear public comment. Attendance was as follows:

CAB Members

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

Stakeholders

Bill McDonell
Lee Poe
Mike French
*Rick McLeod

Regulators

Shelly Sherritt, DHEC

DOE/Contractors

Terry Spears, DOE
Bill Clark, DOE
Greg Johnson, DOE
Ginger Dickert, WSRC
Steve Thomas, WSRC
Elmer Wilhite, WSRC SRNL
Jim Cook, WSRC SRNL
Ed Stevens, WSRC SRNL
Mark Phifer, WSRC SRNL
Bob Hines, WSRC
Jack Mayer, WSRC
Ron Campbell, WSRC
Sonny Goldston, WSRC
Joe Carter, WSRC
Jim Moore, WSRC

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

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

Welcome and Introduction:

Bob Meisenheimer, Chair, welcomed those in attendance and asked them to introduce themselves. He encouraged everyone to submit comments on the draft SRS End State Vision Document and the draft Salt Waste Determination Document with the public comment period ending April 25 and May 20, respectively. An extension of the public comment period on both documents was requested through May 25.

Salt Waste Determination Document:

Ginger Dickert, WSRC, reviewed the draft Salt Waste Determination document. The document was written in the October – December, 2004, timeframe. After several reviews, it was submitted to the Nuclear Regulatory Commission (NRC) February 28, 2005. After security reviews, it was released to the public for public comment on April 1, 2005. The public comment period will end May 20, 2005. It is hoped that the NRC will have their comments back to the site in late May so that there is no compromise to the schedule of an October start date.

Ms. Dickert reviewed the various chapters in the document. The document sets forth criteria to explain that certain waste in the tank farms can be managed and disposed of as other than high-level waste. However, this document only addresses the salt process, not the tank closure process. A Tank Closure Waste Determination document for each individual waste tank would be developed and a public comment period provided.

Section 2 of the document is the background. It discussed the properties of the waste, how it was accumulated, the type tanks, current tank space and describes the processing the site is planning on using. The treated salt waste that will be disposed of in Saltstone will not be high-level waste.

Because of lack of tank space, an interim process using the Deliquification, Dissolution, and Adjustment (DDA), Actinide Removal Process (ARP) and the Modular Caustic Side Solvent Extraction Unit (MCU) will be used to process the tanks with the lowest concentration of cesium. The DDA will remove approximately 50 percent of the cesium in the saltcake. The size of the ARP and the MCU was based on finding existing concrete structures. It was emphasized that 99 percent of the high activity waste will go to the Federal repository. One of the important aspects of running ARP and MCU is the experience and lessons learned that can be channeled into the Salt Waste Process Facility (SWPF).

Each of the following chapters gave the rationale in responding to Section 3116 of the National Defense Authorization Act for 2005. The conclusion was that the solidified low-activity salt waste is not high-level waste based on the considerations set forth in 3116 and may be disposed of as low-level waste at SRS.

The curie level of waste going to Saltstone during the interim salt process would be between 3,000,000 and 5, 000,000 curies. The Saltstone facility is now being modified to accept this higher level waste.

Mr. McLeod was requested by Mr. Miesenheimer to develop a draft recommendation for the May meeting stating that the CAB was now in favor of the interim salt process.

Saltstone Performance Assessment:

Elmer Wilhite, WSRC, introduced Jim Cook and Mark Phifer, who work in the area of Performance Assessments (PA) at the Savannah River National Laboratory (SRNL). PAs and composite analysis (CA) are projections of the effect of DOE low-level waste (LLW) disposal on public health and the environment. They provide the basis for DOE-Headquarters (HQ) to issue a Disposal Authorization Statement to authorize LLW disposal. While the PA assesses a

particular facility or project, the CA assesses the impact from all the sources that may interact with that LLW disposal facility.

The PA is an analysis of a radioactive waste disposal facility conducted to demonstrate there is a reasonable expectation that performance objectives established for the long-term protection of the public and the environment will not be exceeded following closure of the facility. The performance measures for the PA are included in DOE Order 435.1.

Conceptual models are made taking into consideration all the potential movement of contaminants through all the various pathways. Contaminants must remain within acceptable limits. Inadvertent intruder scenarios are considered such as an individual building a house over the waste site, drilling wells, and planting gardens and living off the land. Models are projected out to 10,000 years

The Saltstone PA was issued back in 1992. It was modified in 2002 addressing many additional radionuclides to set limits for higher curie salt waste. The current analysis is specific to Vault 4 to demonstrate acceptability of DDA waste stream. The results compared to the NRC requirements are as follows:

Receptor:	Projected Dose:	10 CFR 61 Objective:
Member of the Public	0.02 mrem/year	25 mrem/year
Intruder Resident	22.0 mrem/year	500 mrem/year
Intruder Post-Drilling	7.1 mrem/year	500 mrem/year

As can be seen, the proposed disposal of waste from salt processing in the Saltstone Disposal Facility will meet both DOE and NRC performance measures.

It was suggested by a member of the committee that DOE insists that the Federal government will have control of the land in perpetuity, but it was suggested that DOE needs to have control of the land covered by law.

National Academy of Science Report Discussion:

Bob Meisenheimer commented that he thought that the tour and meeting of the National Academy of Science (NAS) on April 13 and 14 was very good. Three people from the CAB had comments during the public comment period and he felt that the NAS listened to what they were saying.

Manuel Bettencourt reviewed the NAS report, "Improving the Characterization and Treatment of Radioactive Wastes for the Department of Energy's Accelerated Site Cleanup Program." He indicated that there were things said in the report that hadn't been said by a committee of this caliber before. Some recommendations were:

- If the waste is classified, consider declassifying it or destroying its classified attributes to remove the stringent access control requirements that apply to classified materials.
- Consider using the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) removal action rather than a remedial action to expedite dealing with wastes that present a major risk.

- Consider leaving wastes in place if they present little risk or if removing them with currently available technology would present more hazards than leaving them alone.
- For stored wastes, wastes that are likely to be retrieved, consider the trade-offs between utilizing existing treatment capabilities and providing alternative treatments.

Joe Ortaldo indicated that the NAS report, “Risk and Decisions About Disposition of Transuranic and High-Level Radioactive Waste,” brings out some of the things the CAB has talked about. Balance out the risk of leaving it behind verses the cost and risk of moving it.

It was suggested the committee wait to see if DOE was going to respond to the reports.

Public Comment:

Bill McDonnell said that while the plans for the SWPF were wonderful, he knew from experience that things can go wrong. If something did go wrong, there were two consequences, 1. the high-level processing would be shut down and 2. the site couldn’t support the large scale cesium removal process. He suggested that if something went wrong, he would rather see more cesium directed to Saltstone than have DWPF shut down.

Adjourn:

Bob Meisenheimer reminded everyone of the next Waste Management Committee meeting scheduled for Tuesday, May 3, at the Aiken Municipal Auditorium. The meeting was adjourned.

Follow-Up Actions:

- Get copies of the laminated tank chart that Ginger reviewed with Bob Meisenheimer, Joe Ortaldo and Manuel Bettencourt. Distribute to Bob, Joe and Manuel. - Bill Clark/Jim Moore
- Consider setting up a visit to the Tank Space Center for Bob, Joe and Manuel. - Ginger Dickert/Jim Moore
- Invite Parsons to the next WM Committee meeting to review the SWPF design and project status. – Terry Spears/Jim Moore
- Get DNFSB web site information on SWPF safety to Bob, Manuel and Joe. - Jim Moore
- Rick McLeod develop recommendation on Salt Waste Determination Document. - Rick McLeod
- Send Bill McDonald a copy of the old NAS report. Sonny Goldston to identify which report he is talking about. - Sonny Goldston/Jim Moore
- Request NRC to attend meeting in June. – Bill Clark/Jim Moore