



## **SRS Citizen's Advisory Board**

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#### **Waste Management Committee Meeting**

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

The Savannah River Site (SRS) Citizens Advisory Board (CAB) Waste Management Committee (WMC) met on Wednesday, October 19, 2005, 5:00 PM, at the North Augusta Community Center, N. Augusta, SC. The purpose of this meeting was to discuss the Recommendation Status; Tank 48 Status; Plutonium Uranium Extraction Process (PUREX); Nuclear Regulatory Commission (NRC)/National Academy of Science (NAS)/Salt Waste Determination/ Tank Closure Determination Status, Yucca Mountain Environmental Protection Agency (EPA) Revised Standards and to hear public comment. Attendance was as follows:

#### **CAB Members**

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

#### **Stakeholders**

- Charles Hansen
- John Meyers
- Stanley Howard

\*Rick McLeod

#### **Regulators**

- Rob Pope, EPA
- Reid Rosnick, EPA
- Al Fraizer, GDNR

#### **DOE/Contractors**

- Bill Clark, DOE
- Sherri Ross, DOE
- Mike Simmons, DOE
- Greg Johnson, DOE
- Ginger Dickert, WSRC
- Frank England, WSRC
- Renee' Spires, WSRC
- Ron Campbell, WSRC
- Marshall Looper, WSRC
- Colin Austin, BNFL
- Sonny Goldston, WSRC
- Elmer Wilhite, WSRC
- Jim Moore, WSRC

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

Note: Cassandra Henry is a CAB member of the WMC, but was unable to attend this session.

#### **Welcome and Introduction:**

Joe Ortaldo, Vice Chair, started the meeting. He reviewed the agenda and then asked everyone to introduce themselves.

#### **Recommendation Status:**

Joe Ortaldo recommended that with no disagreement from the WMC, that CAB recommendations 212, 211 and 208 be moved from Pending to Open. He also recommended that CAB recommendations 217 and 194 be moved from Open to Closed. There was no disagreement from the WMC.

**Tank 48:**

Bob Meisenheimer introduced Bill Clark, DOE, to discuss Tank 48. Tank 48 is a 1.3 million gallon fully compliant tank. It contains 238,000 gallons of tetraphenylborate (TPB) contaminated salt waste with a cesium (Cs)-137 content of approximately 1.7 curies per gallon. Tank 48 is important because it is strategically located and has the piping and infrastructure to the salt waste processing program. Numerous alternatives to recover Tank 48 have been explored and several have been pursued without success. These include trying to contract with an offsite vendor to treat the waste onsite, an in-situ treatment combination and an aggregation option. The current option is the aggregation option. A technical baseline was established in July 2005 and a project baseline in August 2005. The design of modifications to Tank 48, Tank 50 and the Saltstone Facility are in progress. The ultimate goal is aggregate or combine the waste with other salt waste streams and dispose of the waste in saltstone to recover Tank 48 in time to serve as a salt feed prep tank for the Salt Waste Processing Facility (SWPF). Tank 48 recovery is a high priority and is covered by the Section 3116 Determination for Salt Waste.

A modification to the South Carolina Department of Health and Environmental Control (DHEC) permit for Saltstone will be required to dispose of the organics but this requirement is a couple of years away.

**Plutonium Uranium Extraction Process (PUREX):**

Mike Simmons, DOE, discussed the progress of the PUREX disposition. The PUREX process is a chemical process for separating plutonium and uranium from fission products. PUREX solvent is composed of tributyl phosphate and n-paraffin (similar to kerosene).

Legacy PUREX waste amounts to 25,000 gallons of Organic PUREX waste (mixed waste) and 12,500 gallons of non-organic liquid (low level waste). There is an additional 60,000 gallons (low level waste) generated from F-canyon deactivation in 2004.

The original disposition path for PUREX solvent waste was the Consolidated Incineration Facility (CIF). CIF suspended operation in 2000. Alternate treatment plans were pursued.

The legacy Aqueous PUREX was designated as non-hazardous low-level waste and processed in the Effluent Treatment Process in February/March 2004.

F-Canyon PUREX waste was segregated into high and low alpha activity batches. The 12,000 gallons of low-alpha activity waste was shipped to the Toxic Substances Control Act (TSCA) incinerator for treatment in April/May 2004. A commercial vendor was contracted to treat the high-activity waste. 20,000 gallons have been shipped to the vendor to-date. 10,000 gallons was shipped to the Nevada Test Site (NTS) for disposal. 8,000 gallons is already loaded for shipment and 20,000 gallons remains in the Solvent Storage Tanks. Just recently one B-25 container failed the NTS Waste Acceptance Criteria (WAC). The site is evaluating this situation.

The original Site Treatment Plan for treating PUREX waste was 2019. The new date is September 30, 2007. All PUREX waste currently in inventory will be dispositioned by

September 2007. Bob Meisenheimer requested an update on PUREX after June but before October 2006. He also requested that DHEC be invited to make comments if they so desire.

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

Sherri Ross, DOE, explained that DOE has completed all actions required by the NRC on the Salt Waste Determination document. NRC's current schedule is to have their report finished by November 18, 2005. It is anticipated that by mid-December DOE will make their Salt Determination. The site is in the process of determining the delay to the start of salt waste processing but it is anticipated it will be three and one-half months later than previously planned. They expect to dispose of salt by spring 2006. Once DOE makes the Salt Determination, then DHEC can complete their review of the Saltstone permit modifications. The site is currently looking at what impacts may result from the delay in the start of processing salt.

The Tank Closure Determination was published in the Federal Register for public comment. The public comment period ends November 21, 2005. It is anticipated that the tank closures will be six months late. When questioned about the legal actions from DHEC due to the delays, it was suggested that DHEC would probably wait until dates were not met before taking action, however, DHEC could respond at any point in time. The NAS report is expected to be complete in January. Several copies of the draft Determination and supporting Performance Objective Demonstration Document were distributed to those attending.

Ms. Ross suggested that the Educational Forum requested by the CAB be held in January. The Tank Closure Determination is expected to be completed late July or August 2006.

**Yucca Mountain Environmental Protection Agency Revised Standards:**

Rob Pope, EPA, responding to the WMC's request, contacted EPA-Headquarters to obtain an EPA speaker on the Yucca Mountain revised standards. Mr. Pope introduced Mr. Reid Rosnick, EPA, from headquarters.

Mr. Rosnick reviewed the EPA's role and background on Yucca Mountain. The Nuclear Waste Policy Act in 1982 defined the basic roles of EPA, NRC and DOE. EPA establishes public health and environmental protection standards for high-level waste disposal. NRC licenses and regulates the repository and using EPA's standards as a compliance measure. DOE constructs and operates the repository. The Energy Policy Act of 1992 maintained these roles, but was specific to Yucca Mountain. This Act required EPA to contract with NAS for a technical study of "reasonable" standards. EPA's standards were to be "based upon and consistent with" NAS findings and recommendations. When asked what caused the greatest risk at Yucca Mountain, Mr. Rosnick stated that it was materials such as americium, neptunium and technetium.

EPA's 2001 Yucca Mountain standards provided protection of the public during storage of waste at the site and after disposal for 10,000 years. DOE was required to continue the Reasonably Maximally Exposed Individual (RMEI) dose projections beyond 10,000 years to the time of peak dose, and place that information in the Environmental Impact Statement (EIS). In July 2004, the United States Court of Appeals for the District of Columbia Circuit Court vacated 40 CFR Part 197 because it determined that the 10,000-year compliance period, on its own, was not 'based

upon and consistent with' the recommendation of the NAS. NAS said in 1995, "We believe there is no scientific basis for limiting the time period to 10,000 years or any other value....We recommend that compliance assessment be conducted for the time when the greatest risk occurs [within limits of geologic stability]." "Although the selection of a time period of applicability has scientific elements, it also has policy aspects that we have not addressed."

In response, EPA is proposing standards to protect public health one million years (NAS stability limit). No other rules in the United States (U.S.), for any risks, have ever attempted to regulate for so long. To meet this challenge, EPA followed the best advice of the international scientific community. They carefully re-examined the NAS's recommendations and reviewed the international regulatory approaches and guidance on radioactive waste disposal. The EPA proposal focuses on those elements of the rule that are affected by the Court decision, i.e., no changes to the RMEI or ground-water standards.

Some of the elements of the proposal are:

- A dose limit of 15 millrem/year for the first 10,000 years after disposal was retained.
- EPA ensured that Yucca Mountain is as safe as the Waste Isolation Pilot Plant (WIPP) or any other disposal system that could be developed for high-level waste or Transuranic waste.
- Proposed a dose limit of 350 millrem/year to apply beyond 10,000 years up to one million years.
- DOE must consider how Yucca Mountain could behave under a wide variety of possible conditions far into the future.
- Over one million years, seismic and igneous events as well as climate change and corrosion processes could be important.
- DOE must calculate radiation doses and compare them to the EPA limits.

The public comment period ends November 21, 2005. There have been public meetings to receive public comment. A final rule will be issued after evaluating public comment.

Bob Meisenheimer explained that he had attended the public meeting in Washington, DC on October 11. He was very well received. There were four EPA members on the panel. He received several comments that they appreciated his attending because they seldom heard from the sites and the public around the sites. Mr. Meisenheimer explained to Mr. Rosnick that the CAB had very good relations with the EPA Region IV representatives as well as DHEC. Mr. Holcomb suggested that a letter be sent to EPA-HQ thanking Mr. Rosnick's bosses for allowing him to present to the SRS CAB.

### **Public Comment:**

Sonny Goldston told the WMC that Dr. Ines Triay responded to Mr. Meisenheimer's letter regarding the Battelle West Jefferson Site Transuranic (TRU) waste shipments to SRS. She thanked the CAB for their letter and consideration as well as saying that DOE would take the CAB expectations into consideration for receiving the Battelle TRU waste at SRS and will make sure equity issues are part of any agreement. Mr. Goldston also mentioned that the Record of Decision on this subject was in the Federal Register October 18.

Rick McLeod pointed out that the draft recommendation on the Pre-70 TRU waste was in the meeting packet and should be reviewed. If there are comments, please let Mr. McLeod know so they could be incorporated.

Stanley Howard introduced himself and stated he was a new member candidate to the CAB.

**Adjourn:**

Bob Meisenheimer adjourned the meeting.

**Follow-Up Actions:**

The following are the action items from the meeting:

- Joe Ortaldo and Perry Holcomb asked how much benzene is in tank 48? - Bill Clark/Jim Moore
- Bob Meisenheimer requested that the Site bring back the PUREX topic to the WMC after June but before October 2006. - Mike Simmons/Jim Moore
- Bob Meisenheimer requested that DHEC be invited to comment on the PUREX topic at the meeting mentioned above. - Jim Moore
- Perry Holcomb and Bill Lawless requested that Bob Meisenheimer's comments at the EPA public meeting in Washington be sent to the WMC members. The two comments included by Bob Meisenheimer should be included. - Jim Moore/Dawn Haygood
- Perry Holcomb is to draft a thank you letter to EPA-HQ for sending Reid Rosnick, EPA, to the WMC meeting. - Perry Holcomb/Dawn Haygood/Jim Moore
- Bob Meisenheimer is to draft a strawman recommendation on the draft Tank Closure Waste Determination document. - Bob Meisenheimer/Jim Moore
- Bill Lawless requested that Bob Meisenheimer, at the full CAB meeting, let the CAB know (1) That Rec. 219 on the Columbus, Ohio Waste was approved by DOE-HQ and (2) 12 years was knocked off the milestone for getting rid of PUREX. - Bob Meisenheimer/Jim Moore
- Bill Lawless requested that a status of the closure of CIF be put out. - Mike Simmons/Jim Moore
- Bob Meisenheimer will consider a brief update on TRU waste at the 11/1 meeting. - Bob Meisenheimer/Jim Moore
- Rick McLeod will change the title on the Pre-70 TRU waste draft motion. - Rick McLeod