

# Waste Management Committee

Savannah River Site  
Citizens Advisory Board  
March 26, 2012



# Waste Management Committee Description



This committee reviews the management, treatment, storage and disposition of radioactive wastes, including transuranic waste (TRU), low-level waste (LLW), mixed low-level waste (MLLW) and radioactive liquid waste (LW) and provides advice and recommendations to DOE on these activities.

# Waste Management Committee Description



Principal goals of the committee are to see:

- (1) a trend of reduction in risk to the public, workers, and the environment posed by these wastes
- (2) integrated and comprehensive systems approaches used in weighing SRS waste management and disposition options.

# Waste Management Work Plan 2012





# Solid Waste

1. Overview of all EM wastes & materials on Site, current status & long term disposal plans

- a. Waste Isolation Pilot Plant (WIPP) Shipping
  - i. Explanation of and other disposition sites (e.g., Clive)

2. Legacy Transuranic (TRU) Waste Program Update

# Liquid Waste



1. Cost Savings Initiative (CSI) & System Plan Rev. 17
2. Glass Waste Storage Status
  - a. Storage Plan to Complete the Mission
  - b. Issues dealing with long term storage of canisters at SRS and alternatives to extended storage on Site
3. Tank Closure
  - a. Status and schedules
- 4 . Salt Waste Processing Overview
  - a. (ARP) /(MCU)- Lifecycle enhancements & Operating Performance
  - b. SWPF start-up plans and transition to long term management structure

# Miscellaneous



1. History and Summary of legislative requirements and Federal Government commitments for bringing waste into SRS and removing waste and materials from SRS.

# SCDHEC Position on Tank 18 & 19 Closure



BOARD:  
Allen Amsler  
Chairman  
Mark S. Lutz  
Vice Chairman  
Steven G. Kisner  
Secretary



C. Earl Hunter, Commissioner

*Promoting and protecting the health of the public and the environment*

BC  
R. Kenyon  
L. Clarence Ba  
Ann B. Kiroi,  
John O. Hutto, Sr.



March 7, 2012

Mr. Victor A. Franklin  
Waste Determination Director  
Savannah River Remediation, LLC  
Savannah River Site  
Aiken SC 29808

RE: Savannah River Site (F-Area Tank Farm)  
1. Industrial Wastewater Closure Module for the Liquid Waste Tanks 18 and 19, SRR-  
CWDA-2010-00003, Revision 2, January 2012  
2. Letter Dated March 2, 2012 from Hennessey to Keisler and Pope: Completion of  
Waste Removal in Tanks 18 and 19

Dear Mr. Franklin:


The South Carolina Department of Health and Environmental Control (DHEC) has received Revision 2 of the Industrial Wastewater Closure Module for Liquid Waste Tanks 18 and 19. This document has been amended in response to comments from DHEC and the United States Environmental Protection Agency, Region 4. A public comment period was held from October 31, 2011 to December 15, 2011. A public meeting for the Closure Module was held on November 15, 2011. During the comment period, comments were received from four entities, all of which supported the closure process and schedule.

DHEC hereby approves the Industrial Wastewater Closure Module for Liquid Waste Tanks 18 and 19, Revision 2 with the following condition. To the extent that DHEC has new information that has a bearing on the adequacy of the closure, the Department reserves the right to modify approval of this module in the future to address activities yet to be performed (e.g., cap installation).

In response to the above referenced March 2, 2012 letter from Hennessey to Keisler and Pope, DHEC agrees that waste removal activities may cease in Tanks 18 and 19 in accordance with Federal Facility Agreement Appendix L, Item 9b.

If you have any questions, please contact Shelly Wilson (803-896-8955).

Sincerely,



Jeffrey P. deBessonnet, P.E., Director  
Water Facilities Permitting Division

# Recommendation Status



# Recommendation 278

## Waste & By-Product Matrix



### Recommendations

1. The CAB recommends that the Department of Energy provide an initial **SRS Waste & By-Products Matrix** in the requested format (See attached example matrix and notes on format). The initial matrix should be completed no later than the scheduled November 15<sup>th</sup> 2011 Full Board meeting. The initial matrix should list all wastes and by-products at the site, planned to come to the site or under consideration to come to the site.
2. The CAB recommends that the Department of Energy provide semi-annual updates to the CAB that contains the past updates in order to facilitate monitoring progress vs. commitments.
3. The CAB recommends that the Department of Energy provide **SRS Waste & By-Products Matrix** reports that are useful for posting on the CAB webpage. These reports can be in the requested format or any other format that the CAB and DOE deem useful to workers and stakeholders.
4. The CAB recommends, as a starting point, that the Department of Energy provide a preliminary, one time, Waste Inventory report. The scope of this inventory is nuclear and hazardous wastes stored in L Basin, H and F Tank Farms, Glass Waste Storage Building, K-Area Material Storage, and E/N Areas (See last page).

SUBJECT: Citizens Advisory Board (CAB) Recommendation Number 278 – Savannah River Site (SRS) Waste and By-Products Matrix, (Your letter, 07/27/11)



Thank you for your recommendation regarding the SRS Waste & By-Products Matrix. DOE-SR appreciates the CAB's interest in the site's nuclear material and waste storage and disposition activities, however, DOE-SR rejects this recommendation.

In Recommendation 278 you identify specific concerns by stating "One issue of very high concern to the workers and stakeholders is the amount of waste and by-products that are currently on site or potentially coming to the site." and "Recent developments related to the Yucca Mountain Repository have raised the level of concern about how DOE plans to meet its commitment to SRS stakeholders i.e., to expeditiously disposition waste from SRS to a designated national repository." DOE-SR believes the current SRS performance measures (presented quarterly to the CAB by DOE-SR) together with the numerous nuclear material and waste disposition presentations given throughout the year provide the information needed to support a forum for open discussions regarding government plans, actions, and decisions. Many of the technical details sought in the recommendation to provide a SRS Waste & By-Products Matrix and Waste Inventory Report (e.g. source of material, specific storage location, processing required, etc.) are beyond what is needed to address the concerns. However, DOE-SR recognizes due to mission changes for some facilities, such as H-Canyon, modifications to the current performance measures will need to be made. DOE-SR will work with the CAB to ensure those changes are adequately reflected. Currently, at the CAB's request, DOE-SR is working to add a metric showing Used Nuclear Fuel inventory.

Recommendation #258  
TRU Waste Disposition Program Follow-up



**Background**

The Department of Energy (DOE), Savannah River Site (SRS) Waste Disposition Programs Division provided the SRS Citizens Advisory Board (CAB) Waste Management Committee an update (Ref. 1) on August 12, 2008, of Transuranic (TRU) waste disposition regarding CAB Recommendation #251 (Ref. 2). Current SRS TRU waste inventory includes:

1. Ensure the SRS funding for FY 2009 is at a level that continues to address the highest risk reduction activities to complete the removal of all legacy TRU waste no later than FY 2013.
2. Provide a FY09 budget update to the CAB when it is known and assess the plans for disposition alternatives for all SRS legacy TRU waste with the goal of disposition of all waste by 2013.
3. The CAB requests that DOE-SRS provide an update to the Committee and the Board on the status of TRU Pad 1 disposition scope and schedule.
4. Provide assurances that efforts are in place to step up obtaining the NRC license for the TRUPACT-III; invite the NRC to brief the CAB on obtaining the necessary license; and inform the CAB about what it can do to assist in resolving technical issues with TRUPACT-III to ensure meeting the 2013 end date.
5. Define completion date of WIPP certification of large box NDA and NDE systems and invite Carlsbad (WIPP) to discuss and outline steps with the CAB Waste Management Committee and Board and the appropriate regulatory parties to resolve technical issues with large box NDE to ensure meeting the 2013 end date.

Recommendation #269  
**Semi-Annual Review of the Inputs and  
Assumptions Used to Develop the Liquid Waste System Plan**



**Background:**

The Savannah River Operations Office (DOE-SR) recently awarded a new Liquid Waste (LW) contract with Savannah River Remediation LLC (SRR). The contract is to optimize Liquid Waste system performance, i.e. accelerate tank closures and maximize waste throughput at the Defense Waste Processing Facility (DWPF).

**Recommendation:**

The Savannah River Site Citizens Advisory Board (SRS CAB) recommends the following:

1. Semi-annual review, starting the 4Q 2010, be conducted that discusses the status of the bases inputs and assumptions for the Liquid Waste System Plan. If these inputs and assumptions have changed then the impact of these changes should be discussed.
2. Semi-annual review of Salt and Sludge Processing Operations including MCU & ARP, DWPF, Saltstone, and base operations supporting these facilities.
3. Semi-annual review of Tank Closure timing and the overall program Critical Path items with emphasis on changes from the previous review.
4. Review of the ten highest programmatic risks that are embedded in the Liquid Waste Plan.
5. Review/status of the criticality studies relating to plutonium disposal in DWPF.

# Potential Recommendation Topics 2012



- Monitoring the effects of funding changes or technical issues on Rev. 17 schedule
- Potential for new missions to create waste that might utilize the storage facilities or processing facilities of SRS and have no current long term disposal paths.
- Potential for Mixed Oxide to produce wastes that might utilize the storage or processing facilities of SRS and have no current long term disposal paths.

# Abbreviations



- TRU – Transuranic Waste
- LLW – Low Level Waste
- MLLW – Mixed Low Level Waste
- LW – Liquid Waste (radioactive)
- WIPP – Waste Isolation Pilot Plant
- DWPF – Defense Waste Processing Facility
- SWPF – Salt Waste Processing Facility
- ARP – Actinide Removal Process
- MCU – Modular Caustic Unit
- TRUPACT III – TRU Shipping container