

Summary Notes, April 15 2008
SRS Citizens Advisory Board
Waste Management Committee Meeting

The Savannah River Site (SRS) Citizens Advisory Board (CAB) Waste Management Committee (WMC) met on Tuesday, April 15, 2008, 5:30-7:30 p.m., at the Aiken Municipal Conference Center, in Aiken SC.

The purpose of the meeting was to discuss the Section 3116 Implementation Status at SRS and an opportunity for public comments on CAB related documents.

ATTENDEES:

CAB Members

- Joe Ortaldo, Chair
- Art Domby, Vice Chair
- Manuel Bettencourt
- Ed Burke
- Don Bridges
- Stan Howard
- Alan Eckmyre
- Madeleine Marshall
Kathe Golden
Ranowul Jzar
Wendell Lyon
Mary Drye
Mercredi Giles
Judy Greene-McLeod

- *Waste Management
Committee Members*

Stakeholders

Al Frazier, G&DNR
Van Keisler, SCDHEC
Heather Cathcart, SCDHEC
Roger Seitz, SRNL
Martha Berry, EPA
Yiaree Prit, SCDHEC
Shelly Sherritt, SCDHEC
Dave Brown, NRC
Anna Bradford, NRC
Roy Schepens, Parsons
Charlie Hansen, Parsons
Michael Norton, Parsons

Rick McLeod, Advisor

DOE/Contractors/Others

Sheron Smith, DOE-SR
Terry Spears, DOE-SR
Jeff Bentley, DOE-SR
Chun Pang, DOE-SR
Larry Ling, DOE-SR
Paul Daugherty, DOE-SR
Jolene Seitz, DOE-SR
Marty Letourneau, DOE-HQ
Kent Rosenberger, WSRC
Kim Hauer, WSRC
Pete Hill, WSRC
Ron Bielewicz, URS
Bill Stevens, WSRC
Tom Robinson, WSRC
Steve Thomas, WSRC
Ginger Dickert, WSRC
Mtesa Wright, WSRC
Nancy Bethuam

Dave Olson, WSRC

Welcome and Introduction:

Joe Ortaldo, WMC Chair, welcomed and thanked everyone for attending the meeting.

Mr. Ortaldo, WMC Chair, referenced the meeting ground rules and encouraged participation of all attendees. Then, the attendees introduced themselves.

Committee Update:

Mr. Ortaldo, WMC Chair, provided an update and status of the 13 WMC open and pending recommendations. He stated that 8 or 9 of the recommendations are almost ready for closure and DOE is working to complete. He continued by introducing the *Waste Solidification Building (WSB) Cost Benefit Analysis* working draft motion for review and comments prior to the full Board meeting.

Meeting Summary:

Due to the number of presenters, a question and answer period has been designated on the agenda; therefore, Mr. Ortaldo requested that all questions be held until requested.

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Presentations and discussions were held jointly by the Department of Energy (DOE) – Headquarters; DOE-Savannah River; and the regulators who provided an update on the activities occurring in the Section 3116 implementation to the tank closures at the Savannah River Site (SRS). The purpose was to provide the CAB members and public up-to-date information and to ensure they are aware of the open technical discussions and interchange between all parties to progress toward tank closures at SRS. The DOE and regulatory participants were: Marty Letourneau, DOE-HQ/EM; Larry Ling, DOE-SR Director, Waste Disposition Programs; Sherri Ross, DOE-SR, General Engineer; Shelly Sherritt, South Carolina Department of Health and Environmental Control; Martha Berry, Environmental Protection Agency - Region 4; Anna Bradford and Dave Brown, Nuclear Regulatory Commission (NRC).

All agencies agreed that the ongoing interagency meetings to discuss technical and policy issues affecting the Performance Assessment and the Waste Determination efforts is working well and enhances their ability to achieve resolution associated with the closure of the 49 tanks at SRS.

Mr. Letourneau, DOE-HQ/EM provided an overview of the National Defense Authorization Act (NDAA) Section 3116 purpose, criteria, and process. He continued by providing the timeline and identifying the generic technical issues that have been addressed. He stated that there is a Website (<http://www.em.doe.gov/Pages/wmdi.aspx>) that has the summaries of DOE/NRC public and scoping meeting summaries that would be useful to the CAB members to understand the activities, efforts, and resolutions achieved by these open discussions between all parties. The DOE-HQ staff conducts weekly calls with the NRC; there are biweekly project reviews with the sites, independent reviews of performance assessments conducted, and workshops to continue effective and timely communications of the NDAA 3116 Waste Determination activities.

Mr. David Brown, NRC, provided an overview of the NRC monitoring of the Saltstone Facility under Section 3116 of the NDAA. NRC monitoring is focused on whether there is reasonable assurance that DOE can meet the performance objectives of 10 CFR Part 61. He stated that in October 2007 and March 2008 observation visit, the NRC staff observed operations at the Saltstone Production Facility and the Saltstone Disposal Facility. Mr. Brown reviewed in detail the results of the observation visits. He stated that the periodic compliance monitoring report would be issued in spring 2008 for CY 2007.

Sherri Ross, DOE-SR Engineer, provided a briefing on the status of the F Area Tank Farms. The purpose of the briefing was to describe the process and status of closing the F Area Tank Farm including the activities performed in 2007 and 2008. The Performance Assessment scoping meetings provided a forum for open technical discussions and interchange between DOE, NRC and the regulators. She stated that, during the eight meetings, input parameters and approaches for analyzing the facility performance were discussed. In closing, Ms. Ross stated that DOE plans to issue the Performance Assessment to NRC, SCDHEC, and EPA by August 2008, complete mechanical cleaning of Tanks 18 and 19 by December 2008, and complete oxalic acid cleaning of Tanks 5 and 6 by December 2008.

Shelly Sherritt, SCDHEC, stated that they have two regulatory concerns. They are the Federal Facility Agreement schedule to close 22 non-compliant tanks appropriately and timely; and any residuals left in the state must be covered by the Closure Plan. SCDHEC raised these concerns as early as 2005 and recommended some practices that have been highly successful at SRS. SCDHEC feels we are on a good path to resolve these two issues. The Department will provide to SCDHEC a budget plan and then a closure model after each tank is clean that will be available to the public.

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Martha Berry, EPA, stated that they will be working from a CERCLA perspective. The EPA general perception is that issues will be resolved and progress made.

All agencies agreed that the ongoing interagency meetings to discuss technical and policy issues affecting the Performance Assessment (PA) and the Waste Determination efforts is working well and enhances their ability to achieve resolution associated with the closure of the 49 tanks at SRS.

Open discussions from CAB members indicated their concern for safe and timely closure of all tanks at SRS; the sequence of events planned to issue the Performance Assessment and Closure Plan; the agreement between all parties on the point of compliance; and how clean is clean - meeting the Congress mandate of removing highly radioactive radionuclides to the maximum extent practicable. It was discussed how the Department and the regulators may make different decisions based on their agency requirements, but also these differences may be complimentary to each other as well. The point of compliance determination may be a different definition by each agency, but each definition will be based on the same Performance Assessment. There are a lot of implementation processes being worked out now to make the process easier. All parties agreed that they are not in disagreement and expressed the significant benefits of the joint effort. The CAB would like to remain informed of the public and scoping meeting activities and results, and kept apprised of the progress of cleaning and achieving tank closure at SRS.

All briefings were well received. No actions or recommendations evolved from the meeting discussions.

Public Comment:

Bill Lawless encouraged the CAB members to use the recommendation process to give formal guidance to the Department. Mr. Lawless stated that the recommendation process better educates the new CAB members, and if not used, the CAB may lose their technical assets.

Adjourn:

Mr. Ortaldo adjourned the meeting at 7:40 p.m.

Follow-Up Actions:

Marty Letourneau, DOE-HQ, committed to incorporating issues and ground water monitoring in the Performance Assessment Workshop scheduled to occur in the fall 2008.

PRESENTATIONS:

Update: DOE Activities under Section 3116 of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 *(presented by Martin Letourneau, DOE-HQ/EM)*

OVERVIEW OF NDAA 3116

- (1) The waste does not require disposal in a deep geologic repository
- (2) The waste has had highly radioactive radionuclides removed to the maximum extent practical
- (3A) If the waste is Class C or less, its disposal must meet the performance objectives in 10 CFR 61 Subpart C

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- (3B) If the waste exceeds Class C, its disposal must meet 10 CFR 61 Subpart C and DOE must consult with NRC on development of its disposal plans
- Waste disposed in the State (ID and SC)
- Subject to State issued permit or State-approved closure plan
- NRC Monitoring role under 3116 (b)

TIMELINE

- October 2004 – NDAA enacted by Congress
- December 2004 – NDAA signed by President
- January 2005 – EM Integrated Project Team formed to implement 3116
- April 2005 – Draft Saltstone Basis Document published
- September 2005 – Draft Idaho Basis Document Published
- October 2005 – Draft Tanks 19 & 18 Basis Document published
- January 2006 – Final Saltstone Waste Determination issued
- April 2006 – Lessons Learned meeting among NRC, DOE, and States
- July 31, 2006 – Letter from DOE General Counsel to NRC
- November 2006 – DOE/NRC Public Meeting
- November 2006 – Final Idaho Tank Farm Waste Determination issued
- December 2006 – DOE/NRC initiate Generic Technical Issue discussions
- February 2007 – FTF Scoping Meetings begin
- July 2007 – DOE/NRC Public Meeting

GENERIC TECHNICAL ISSUES

- Grouping tanks for submittal *Complete*
- WD prior to waste removal *Complete*
- Point of compliance location *Complete*
- Cumulative impacts *Complete*
- Concentration averaging *Complete*
- Basis for terminating waste removal *Complete*
- Model support *Complete*
- Sensitivity and uncertainty analyses *Complete*
- Long-term grout performance *Complete*
- Long-term cap performance
- Inventory and characterization

DOE WEB RESOURCES

- <http://www.em.doe.gov/Pages/wmdi.aspx>
 - Summaries of DOE/NRC Public Meetings
 - Summaries of DOE/NRC Generic Technical Issue Discussions
 - Summaries of Scoping Meetings
 - Waste Determinations

DOE HQ ACTIVITIES

- Weekly Staff-to-Staff coordination calls with NRC
- Bi-weekly DOE Project Reviews
- Low-Level Waste Disposal Facility Federal Review Group (LFRG) independent reviews of performance assessments
- Workshops
 - Lessons Learned
 - Modeling
 - Technology

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NRC Monitoring of the Saltstone Facility *(presented by David Brown, NRC)*

Presentation Outline

- Overview of NRC Monitoring under Section 3116 of the National Defense Authorization Act for Fiscal Year 2005 (NDAA)
- October 2007 Observation Visit
- March 2008 Observation Visit

- Periodic Compliance Monitoring Report for 2007

Overview of NDAA Monitoring

- Monitoring role for NRC specified in 3116(b) of the NDAA

- NRC monitoring is focused on whether there is reasonable assurance that DOE can meet the performance objectives of 10 CFR Part 61

- A detailed description of NRC's monitoring program is provided in Chapter 10 of NUREG-1854, "NRC Staff Guidance for Activities Related to U.S. Department of Energy Waste Determinations" (August 2007)

Some Elements of NRC's Monitoring Program

- Monitoring Plan for each DOE Waste Determination

- Observation reports are issued after each visit

- Other monitoring activities are described in a Periodic (Annual) Compliance Monitoring Report

- If NRC staff were to find that one or more performance objectives are not or will not be met, it would issue a notification letter to DOE and South Carolina stating its concerns.

- If NRC staff were to find that DOE's response is not adequate, it would issue a non-compliance letter to Congress, the State, and DOE.

October 2007 Observation Visit Objectives

- Grout Formulation and Placement

- Vault Construction

- Waste Sampling

- Radiation Protection Program

October 2007 Observation Visit Grout Formulation

- NRC staff observed operations at the Saltstone Production Facility and Saltstone Disposal Facility

- Effective QA Program

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- NRC recommended independent testing of a grout ingredient

- NRC is tracking two open items:
 - Final product characterization
 - Impacts of flush water addition

October 2007 Observation Visit Vault Construction

- Vault 4 was being filled during the NRC observation visit

- NRC staff observed wet cracks on the vault wall

- NRC staff requested information on whether the presence of cracks is consistent with DOE's performance assessment

- DOE will provide additional information on the impacts of the cracks on long-term performance of saltstone grout disposal

October 2007 Observation Visit Waste Sampling

- NRC staff did not observe sampling activities, but reviewed sampling procedures

- NRC staff recommended that DOE monitor the amount of solids present in waste transfers to the Saltstone Production Facility.

October 2007 Observation Visit Radiation Protection

- NRC staff reviewed worker dose monitoring records

- NRC staff did not observe environmental sampling activities, but reviewed sampling procedures and results for groundwater and air effluent monitoring

- No issues were identified, and NRC staff will continue monitoring activities related to environmental monitoring and radiation protection.

March 2008 Observation Visit Objectives

- Waste Sampling
- Inventory
- Environmental Monitoring
- Saltstone Characterization and Testing
- Vault Characterization, Operating Experience, and Assessment

Periodic Compliance Monitoring Report

- This "periodic" report is currently an annual report
- Summarizes NRC monitoring of both INL and SRS disposal actions
- Summarizes open issues and recommendations
- First report is planned to be published in Spring 2008 for CY 2007.

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F Tank Farm Status (*presented by Sherri Ross, DOE-SR*)

Purpose: Describe the process and status of closing the FTF including the activities performed in 2007 and planned for 2008.

Presentation Overview:

- Pictures of FTF and Tanks
- Tank Closure Process Status
- FTF PA Scoping
 - Meetings
 - Process
 - Topics
 - Lessons Learned
- Upcoming Activities and Schedule

Tank Closure Process Status (Flow chart)

FTF PA Scoping Meetings

- Provided forum for open technical discussions and interchange between DOE, SCDHEC, NRC, EPA, and contractors.
- Input parameters and approaches for analyzing the facility performance were discussed.
- Eight meetings between February 2007 and January of 2008.
- Minutes documented on DOE website:
<http://www.em.doe.gov/Pages/3116Summaries.aspx>

Scoping Meeting Process

- “Input Packages” of proposed approaches and data supplied about four weeks before meetings.
- Meetings involved excellent exchange of information between the technical staff of various agencies.
- The process did not result in “approval” of the inputs and approaches but received valuable comments, concerns and recommended improvements.
- Predominately met in Columbia, SC

Scoping Meeting Topics

- Closure Cap
- Exposure Pathways
- Radiological Screening
- Bioaccumulation Factors and Consumption Rates
- Risk Assessment Approach
- Hydrogeology
- Waste Tank and Ancillary Equipment Design
- Waste Release Mechanisms
- Modeling Code Integration
- Dose Conversion Factors
- Integrated Conceptual Model
- Residual Inventory
- Grout/Concrete Testing Properties
- Tank Liner Life Estimates
- PORFLOW Model
- GoldSim Model

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- Sensitivity and Uncertainty Analyses

Scoping Meeting Lessons Learned

- Scoping meetings provide excellent opportunity to discuss technical topics early.
- Meeting preparation was labor intensive.
- Process is time consuming.
- Increased quality of FTF PA and technical basis of analysis.

Upcoming Activities and Schedule

- DOE issue FTF PA to NRC, SCDHEC and EPA by August 2008.
 - Public educational forum on Performance Assessments ~ Fall 2008.
- Complete mechanical cleaning of Tanks 18 and 19 by December 2008.
- Complete oxalic acid cleaning of Tanks 5 and 6 by December 2008.

Summary

- Progress toward tank closures
 - Waste Removal ongoing for Tanks 18, 19, 5, and 6.
 - Documentation to support closure decisions
 - FTF PA available this summer
 - FTF WD ~ Fall 2009
 - FTF Closure Plan ~ Fall 2009