

June 29, 2012

MEMORANDUM TO: Gregory Suber, Chief
Low-Level Waste Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection

FROM: Nishka Devaser, Project Manager.../RA/
Low-Level Waste Branch
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection

SUBJECT: MAY 29, 2012, PUBLIC MEETING SUMMARY: MEETING TO
DISCUSS THE PROPOSED PATH FORWARD FOR SALT WASTE
DISPOSAL AT THE SAVANNAH RIVER SITE IN ACCORDANCE
WITH THE NATIONAL DEFENSE AUTHORIZATION ACT FOR
FISCAL YEAR 2005, DOCKET NO.: PROJ0734

On May 29, 2012, the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Department of Energy (DOE) engaged in a public meeting to discuss details of the DOE's proposed path forward in response to NRC's recently published Technical Evaluation Report (TER) documenting its review of the 2009 Performance Assessment for the Saltstone Disposal Facility at the Savannah River Site (2009 PA). The NRC's review of the 2009 PA was conducted in accordance with its monitoring responsibilities under Section 3116 of the National Defense Authorization Act for Fiscal Year 2005. The meeting was held in an NRC conference room and also by teleconference from 1:00 p.m. to 3:00 p.m. on May 29, 2012.

Enclosure: Meeting Summary

cc: WIR Service List

CONTACT: Nishka Devaser, FSME/DWMEP
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NAME	NDevaser	ARidge	AWalkerSmith	CMcKenney	GSuber	NDevaser
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Public Meeting Summary: Meeting to Discuss Status of the U.S. Nuclear Regulatory Commission Monitoring Activities at the Saltstone Disposal Facility at the Savannah River Site

Purpose

The primary purpose for the meeting was for the U.S. Department of Energy (DOE) to present a proposed path forward to the U.S. Nuclear Regulatory Commission (NRC) in response to the NRC's review of the *2009 Performance Assessment for the Saltstone Disposal Facility at the Savannah River Site* (2009 PA). NRC has documented this review in a technical evaluation report (TER) [NRC, 2012a]. This was the second of a series of meetings that the NRC and DOE are holding to discuss results from the NRC's TER and potential paths forward for DOE to resolve issues identified in the TER.

Background

In November 2009, DOE submitted an updated Performance Assessment (PA) for the Saltstone Disposal Facility (SDF) [SRR-CWDA-2009-00017] to the NRC for review. The NRC reviewed the PA in its capacity as a monitor of DOE's disposal actions at the SDF in accordance with Section 3116(b) of the National Defense Authorization Act for Fiscal Year 2005 (NDAA). In accordance with these responsibilities, the NRC staff began its review of the 2009 Saltstone PA in November 2009. The purpose of the review was to assess whether DOE's disposal actions, as described in the PA, meet the performance objectives of 10 CFR 61, Subpart C. The review included two Requests for Additional Information (RAI). The RAI process under the NDAA typically involves the NRC preparing an RAI within 90 days of receiving the PA and DOE responding to that RAI within 90 days. The NRC sent the first RAI (RAI-2009-01) on March 31, 2010 (NRC, 2010a), to which DOE responded on July 22, 2010 (SRR-CWDA-2010-00033). After review of DOE's responses, the NRC staff concluded that some of these responses did not fully address the NRC's questions and concerns with assumptions in DOE's expected case (or base case).

The NRC sent a second RAI (RAI-2009-02) on December 15, 2010 (NRC, 2010b). DOE responded in draft form in April, 2011 (SRR-CWDA-2011-00044, Rev. 0). DOE and NRC discussed the draft at a public meeting on April 26, 2011. The DOE then submitted a final version on August 26, 2011, (SRR-CWDA-2011-00044, Rev. 1). To respond to the NRC's concerns with DOE's base case, DOE developed a new case called Case K.

After reviewing DOE's second RAI response (SRR-CWDA-2011-00044, Rev. 1) and the computational models associated with Case K, the NRC completed its review on April 30, 2012 (NRC, 2012a). The NRC staff found that it does not have reasonable assurance that the planned disposal activities at the SDF meet the performance objectives of 10 CFR 61, Subpart C. Specifically, the NRC staff does not have reasonable assurance that DOE's proposed disposal activities at the SDF meet the performance objective for protection of the general population from releases of radioactivity (§61.41). Although the NRC staff cannot conclude that the performance objective in §61.41 is met, based on DOE's results and NRC's own independent analyses, the potential dose to an off-site member of the public from DOE's disposal actions is still expected to be relatively low (i.e., approximately 1 mSv/yr [100 mrem/yr], the public dose limit in §20.1301). In accordance with NRC's guidance document on Waste Incidental to Reprocessing (NRC, 2007b), the NRC issued a Type IV letter of concern concurrent with its issuance of the TER (NRC, 2012b).

Enclosure

Following issuance of the TER and Type IV Letter, NRC and DOE engaged in a public meeting for NRC to describe the details of the TER and the results that led the NRC to issue the Type IV Letter (NRC, 2012d).

Meeting Summary

After introductions, the NRC Director of the Division of Waste Management and Environmental Protection, Larry Camper, welcomed the group, and expressed interest in hearing DOE's proposed path forward. Following Mr. Camper's opening remarks; Shelly Wilson of South Carolina Department of Health and Environmental Control (SC DHEC) affirmed that the State also has a continued interest in meeting to discuss resolution of the issues described in NRC's TER.

Following Ms. Wilson's remarks, Terrel (Terry) Spears of DOE-Savannah River (DOE-SR) and Richard Moorer of DOE headquarters expressed appreciation that the meeting was taking place and stated that they were looking forward to a productive dialog in this and future meetings.

Once opening remarks were complete, Sherri Ross (DOE-SR tank waste operations project manager) and Linda Suttora (DOE federal facilities project manager), began DOE's presentation. DOE's presentation began with a detailed background of the site, the saltstone process, and the restrictions established by DOE Order 435.1-1 and the 10 CFR Part 61, Subpart C performance objectives. They then concluded with a brief description of DOE's near term path forward to resolve NRC's concerns in the TER and a brief description of the research taking place that will address those concerns (DOE, 2012). The reader is encouraged to view the presentation for further details.

Action Items

Per DOE's presentation, and the discussion that took place during the meeting, the following action items were agreed upon:

- DOE intends to provide a collection of research results they have developed since August 2011 in June 2012.
- DOE intends to respond to the NRC's April 30, 2012 Type IV letter (NRC, 2012b) in July or August 2012. The reply will contain DOE's proposed path forward for NRC's review and comment.
- Upon receipt, NRC intends to review the updated collection of research and proposed path forward documentation. The NRC staff plans to meet with DOE approximately 30 days following receipt of this response in a public meeting in Aiken, SC.
- DOE and NRC will schedule a follow-up conference call to discuss a list of periodic, annual reports developed by DOE for NRC review.

Questions and Comments

The NRC staff had a few comments and questions during the meeting, which are captured in Table 1. No members of the public had comments or questions during the meeting.

Table 1: NRC Comments or Questions Regarding DOE Path Forward

NRC Question/Comment	DOE Response/Rebuttal
DOE refers to “new information” pertinent to the topics we are discussing. To what information is the DOE referring?	Research results related to the saltstone disposal process emerge continuously. DOE stated that DOE had no means to transfer this information to the NRC after the last onsite observation in April 2011.
Regarding the new information to which DOE is referring in its presentation, the NRC always accepts documentation in its monitoring role under the NDAA. In the past, DOE has submitted information independent of NRC’s monitoring visits to the site, and the NRC staff expects that DOE will continue to submit new information that has an impact on monitoring when it becomes available.	Because the TER was in its final stages of completion, DOE did not want to prolong that process by submitting new information that would require review.
Was any of the new information to which DOE refers information that NRC staff found on its own? More specifically, were any of the documents listed in the TER’s references section documents that would be grouped in this “new information?”	Yes, two examples of this are the new K_d research and the updated hydraulic conductivity results, which are still ongoing and discussed in this presentation.
With regard to the lysimeters being implemented around the new disposal cells, what do the bottom of these lysimeters look like? More specifically, will there be soil between the simulated saltstone sample and the collection area for the lysimeter?	Soil is situated on top and bottom of the simulated saltstone samples. DOE intends to provide a tour of the lysimeter testing area and organize a briefing by the lysimeter-testing staff at the NRC’s next observation trip to the SDF.
Does DOE intend to use the lysimeter testing method for the saltstone leaching tests and for the soil K_d experiments? And if so, does DOE have a plan to distinguish the effects of leaching from the saltstone from the effects of soil transport to the collection area?	Yes, there are soil samples and cementitious samples at the testing area. Questions about specific details will have to be addressed to Dan Kaplan, the technical lead. Later in the meeting, DOE explained that each lysimeter test would be performed in triplicate, and that after certain periods of time, each would be sacrificed and dismantled so that DOE could analyze radionuclide transport into the soil below the simulated saltstone.

NRC Question/Comment	DOE Response/Rebuttal
Are saltstone samples pulled out before the cell is completely full?	Once a saltstone cell is filled, core samples are retrieved and the tube is refilled.
How much is this additional testing going to affect the schedule for filling the vaults?	The testing is an external activity, so disposal operations into the new cells should not be affected at all.
The table on slide 35 (DOE, 2012) makes it seem as though all of the NRC's concerns considered in DOE's crosswalk refer to waste form. Is this an example of how DOE intends to address NRC's concerns, or is this DOE's path forward in accounting for all of the issues raised in the TER?	This is only one facet of DOE's response to NRC's concerns in the TER. The table is showing both DOE's response to NRC's concerns on waste form and represents an example of the approach being taken to address NRC's concerns.
Regarding the closure cap degradation studies that are being planned, are these the generalized closure caps for the site (i.e., for F-Area, H-Area, Z-Area)?	Yes.
There seems to be very little actually "new" information in the DOE's presentation. Much of the material covered so far relates to issues identified in 2005 (NRC, 2005). Is there any new information in DOE's plans to address concerns listed in the TER?	Yes, most of the items discussed so far have been listed in the DOE's PA maintenance plan for some time. In addition, much of the background provided in this presentation is to ensure that members of the public listening in receive the full background of the project.
When DOE uses the phrase "actual disposal conditions," what are those conditions? The NRC asks this question to ensure that actual conditions are considered prior to so much additional work being done, and DOE potentially heading in a direction that doesn't account for the site's actual behavior.	DOE's work in long-term lysimeters, as described in the slide of this presentation on that topic, should address this question.
How do the concentrations expected to go into disposal units 2A and 2B compare to the concentrations in the waste disposed in Vault 4?	The concentrations are very similar.

NRC Question/Comment	DOE Response/Rebuttal
DOE referred to a formal submittal of some kind for the month of June, what is to be submitted?	The submittal described is on the path forward slide of the presentation (DOE, 2012); it will reflect any new research results since August 2011. This package will include, among other things, the revised GoldSim PA model.
What is the current schedule of disposal of saltstone into the new disposal cells?	Only after submitting the responses to the NRC, and after DOE management has approved the path forward to account for NRC's concerns will saltstone be disposed of in the new cells. In addition, regardless of the progress of communication between NRC and DOE, the new cells will not be ready for disposal until August 2012.
Is waste currently being disposed of in Vault 4?	No, disposal operations are not currently active due to Facility upgrades. Resumption of operations in August could include Vault 4 but limited volumes are available.
What is the current schedule for filling the void spaces in Vault 4 with clean grout?	Currently, DOE is only scoping this concept. Scheduling of such an activity has not yet been decided; it will ultimately depend on funding.
Do the inventory estimates in the last quarterly report of 2011 represent the final complete inventory for Vault 4?	Not necessarily, this information will be provided in the June submittal of new information to the NRC.

Closing Remarks

Nishka Devaser, NRC project manager for Saltstone provided closing remarks. Mr. Devaser expressed appreciation to members of DOE-Savannah River and Savannah River Remediation that made the trip up to Maryland for the meeting and to other attendees for making the trip to NRC headquarters and for calling in.

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Meeting Attendees

George Alexander	U.S. Nuclear Regulatory Commission
Larry Camper	U.S. Nuclear Regulatory Commission
Nishka Devaser	U.S. Nuclear Regulatory Commission
Maurice Heath	U.S. Nuclear Regulatory Commission
Janelle Jessie	U.S. Nuclear Regulatory Commission
Lisa London	U.S. Nuclear Regulatory Commission
Christopher McKenney	U.S. Nuclear Regulatory Commission
Karen Pinkston	U.S. Nuclear Regulatory Commission
Christianne Ridge	U.S. Nuclear Regulatory Commission
James Shaffner	U.S. Nuclear Regulatory Commission
Shelly Wilson	South Carolina Department of Environmental Health and Control
Sherri Ross	U.S. Department of Energy - Savannah River
Terry Spears	U.S. Department of Energy - Savannah River
Patricia Suggs	U.S. Department of Energy - Savannah River
Brenda Hays	U.S. Department of Energy - Savannah River
Richard Moorer	U.S. Department of Energy
Gary R Peterson	U.S. Department of Energy
Linda Suttora	U.S. Department of Energy
Frank England	Savannah River Remediation
Kim Hauer	Savannah River Remediation
Larry Romanowski	Savannah River Remediation
Kent Rosenberger	Savannah River Remediation
Steven Thomas	Savannah River Remediation
John Tseng	Savannah River Remediation
Roger Seitz	Savannah River National Laboratory
Martha Berry	U.S. Environmental Protection Agency
Robert Pope	U.S. Environmental Protection Agency
W.T. (Sonny) Goldston	EnergySolutions
Kenny Fletcher	ExchangeMonitor
John T. Greeves	Member of the Public