



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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June 8, 2015

MEMORANDUM TO: Andrew Persinko, Deputy Director
Division of Decommissioning, Uranium Recovery,
and Waste Management Programs
Office of Nuclear Material Safety
and Safeguards

THRU: Gregory Suber, Chief **/RA/**
Low-Level Waste Branch
Division of Decommissioning, Uranium Recovery,
and Waste Management Programs
Office of Nuclear Material Safety
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FROM: Harry Felsher, Sr. Project Manager **/RA by Terrence Brimfield for/**
Low-Level Waste Branch
Division of Decommissioning, Uranium Recovery,
and Waste Management Programs
Office of Nuclear Material Safety
and Safeguards

SUBJECT: ONSITE OBSERVATION GUIDANCE FOR JULY 7 – 8, 2015,
MONITORING VISIT TO THE SAVANNAH RIVER SITE, SALTSTONE
DISPOSAL FACILITY (DOCKET NO. PROJ0734)

The U.S. Nuclear Regulatory Commission (NRC) staff is planning an onsite observation visit on July 7 – 8, 2015, to the U.S. Department of Energy Savannah River Site, Saltstone Disposal Facility to monitor activities related to the disposal of non-high-level waste, per the NRC responsibilities under the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005.

The enclosed guidance describes the areas of focus for the onsite observation visit. The detailed agenda and summary will be included in the onsite observation visit report.

Enclosure:
Onsite Observation Guidance

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ONSITE OBSERVATION GUIDANCE FOR JULY 7 – 8, 2015, MONITORING VISIT TO THE SAVANNAH RIVER SITE SALTSTONE DISPOSAL FACILITY

PURPOSE:

The purpose of this document is to provide onsite observation guidance for a planned visit on July 7 – 8, 2015, to the U.S. Department of Energy (DOE) Savannah River Site (SRS) Saltstone Disposal Facility (SDF) to monitor activities related to the disposal of non-high-level waste, per the U.S. Nuclear Regulatory Commission (NRC) responsibilities under Section 3116(b) of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 (NDAA).

OBJECTIVES:

1. Observation and technical review of activities and documentation; and
2. Follow-Up Action Items from previous onsite observation visits, technical review reports, or teleconference calls.

BACKGROUND:

NDAA Section 3116(a) authorizes the DOE, in consultation with the NRC, to determine whether certain radioactive waste related to the reprocessing of spent nuclear fuel is not high-level waste provided certain criteria are met. NDAA Section 3116(b) requires the NRC to monitor the DOE disposal actions to assess compliance with Title 10, *Code of Federal Regulations* (10 CFR), Part 61, Subpart C performance objectives for low-level waste. On March 31, 2005, the DOE submitted to the NRC a draft Waste Determination (WD), "Draft Section 3116 Determination, Salt Waste Disposal, Savannah River Site." The purpose of the draft WD was to demonstrate compliance with the criteria in NDAA Section 3116(a), including compliance with the performance objectives in 10 CFR Part 61, Subpart C. Per the NRC's NDAA consultation role, the NRC staff reviewed the draft WD. In December 2005, the NRC staff documented the results of its review in a Technical Evaluation Report (TER), where the NRC concluded that there was reasonable assurance that the applicable NDAA criteria could be met, provided that certain assumptions made in the DOE analysis were verified during monitoring. The DOE issued the final WD in January 2006, which took into consideration the assumptions, conclusions, and recommendations documented in the NRC TER.

Per the NRC's NDAA Section 3116(b) monitoring role, the NRC finalized Revision 0 of the SDF monitoring plan in May 2007. In November 2009, DOE submitted an updated Performance Assessment (PA), "2009 Performance Assessment for the Saltstone Disposal Facility at the Savannah River Site" for the NRC review per NRC's NDAA monitoring role. Following extensive discussions with the DOE, the NRC staff completed its review and documented the NRC conclusions in a TER dated April 30, 2012 (ADAMS Accession No. ML121020140). In that TER, the NRC concluded that it did not have reasonable assurance that the performance objective in §61.41 would be met. However, the NRC concluded that the §61.42, §61.43, and §61.44 performance objectives were met. Per the NRC's NDAA monitoring role, the NRC finalized Revision 1 of the SDF monitoring plan in September 2013 and it is available in ADAMS at Accession No. ML13100A113. This onsite observation guidance was developed in accordance with the September 2013 SDF monitoring plan to ensure consistency in the NRC staff monitoring activities.

Enclosure

OBSERVATION REQUIREMENTS:

The NRC onsite observation of the disposal actions taken by the DOE focuses on the performance objectives set out in 10 CFR Part 61, Subpart C. Those performance objectives are: (i) Protection of the general population from releases of radioactivity (§61.41), (ii) Protection of individuals against inadvertent intrusion (§61.42), (iii) Protection of individuals during operations (§61.43), and (iv) Stability of the disposal site after closure (§61.44). The NRC staff will use the following guidance to direct the observation while visiting the SRS SDF.

Observation and Technical Review of Activities and Documentation:

The NRC plans to conduct the following activities during this onsite observation visit (and next to each activity is the associated Monitoring Factor(s) (MFs) from the September 2013 SDF monitoring plan):

1. NRC to answer any DOE questions about the NRC Request for Additional Information Questions for the DOE "Fiscal Year 2014 Special Analysis for the Saltstone Disposal Facility at the Savannah River Site" (SRR-CWDA-2014-00006, Rev. 2). (All MFs)
2. Update on groundwater monitoring data. (MF 8.02)
3. Review recent research results developed since the previous onsite observation visit. (All MFs)
4. Tour the site, SDS 4, and construction of SDS 6. (MF 6.01 through MF 6.05)
5. Discuss status of operations at the SDF since the last onsite observation visit, including volume of grout poured, current status of SDS 4 (e.g., progress/timetable update on cold cap and roofing), and any unusual occurrences (e.g., visual inspection results, production issues, worker protection). (MF 3.02, MF 3.03, and MF 4.02)
6. If saltstone is being poured, then observe saltstone production facility operations. (MF 1.01, MF 3.02, MF 3.03, MF 4.02, and MF 11.01)
7. View SDS 3A, SDS 3B, SDS 5A, and SDS 5B. (MF 6.03 through MF 6.05)
8. View wells ZBG-2 through ZBG-8 and ZBG-2C. (MF 8.02 and MF 10.10)
9. Discuss GoldSim modeling for the DOE "Fiscal Year 2014 Special Analysis for the Saltstone Disposal Facility at the Savannah River Site" (SRR-CWDA-2014-00006, Rev. 2). (MF 10.01)

Follow-Up Action Items from Previous Onsite Observation Visits, Technical Review Reports, or Teleconference Calls:

1. The DOE to provide the NRC staff with additional photos of construction of SDS 6, when available: (MF 6.03 through MF 6.05)
 - tension wires; and
 - wall to roof connections.

2. The DOE to provide the NRC staff with additional groundwater data relative to: (MF 8.02)
 - historical data on Z-Area wells
 - water thickness of upper zone of the Upper Three Runs Aquifer over time.
 - additional well data related to changes in position of the water line between the lower and upper zones of the Upper Three Runs Aquifer over time (including wells beyond Z-Area as applicable).

Completion of any observation or technical review of activities and documentation, including Follow-Up Action Item, is dependent on either DOE performing the activity and/or the availability of the documentation during the onsite observation visit.