

July 29, 2013

MEMORANDUM TO: Aby Mohseni, Deputy Director
Environmental Protection
and Performance Assessment Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

THRU: Janelle Jessie, Acting Chief /RA/
Low-Level Waste Branch
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FROM: Harry Felsher, Sr. Project Manager /RA/
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Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
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SUBJECT: ONSITE OBSERVATION GUIDANCE FOR AUGUST 27-28, 2013,
MONITORING VISIT TO THE SAVANNAH RIVER SITE, F-AREA
TANK FARM (DOCKET NO. PROJ0734)

The U.S. Nuclear Regulatory Commission (NRC) staff is planning an onsite observation visit on August 27-28, 2013, to the U.S. Department of Energy (DOE) Savannah River Site (SRS), F-Area Tank Farm to monitor activities related to the disposal of non-high-level waste, per the NRC responsibilities under the National Defense Authorization Act for Fiscal Year 2005 (NDAA).

Enclosure:
Onsite Observation Guidance

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ONSITE OBSERVATION GUIDANCE FOR AUGUST 27-28, 2013, MONITORING VISIT AT THE SAVANNAH RIVER SITE F-AREA TANK FARM

PURPOSE:

The purpose of this document is to provide onsite observation guidance for a planned visit on August 27-28, 2013, to the U.S. Department of Energy (DOE) Savannah River Site (SRS) F-Area Tank Farm (FTF) 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 related to near-term closure activities; and
2. Follow-on activities from previous onsite observation visits and clarifying technical teleconference calls.

BACKGROUND:

Section 3116(a) of the NDAA authorizes 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. Section 3116(b) of the NDAA requires the NRC to monitor DOE disposal actions to assess compliance with Title 10 of the Code of Federal Regulations (10 CFR), Part 61, Subpart C, performance objectives for low-level waste.

On September 30, 2010, DOE submitted to the NRC a draft waste determination titled, "Draft Section 3116 Determination, F-Area Tank, Savannah River Site." The purpose of the draft waste determination was to demonstrate compliance with the criteria in Section 3116(a) of the NDAA, including compliance with the performance objectives in 10 CFR Part 61, Subpart C. In its consultation role, the NRC staff reviewed the draft waste determination and highlighted a number of technical concerns during a series of public meetings. In October 2011, NRC staff documented the results of its review in a Technical Evaluation Report (TER). In the TER, NRC staff made a number of recommendations to DOE that NRC believes that, if implemented by DOE, will enhance DOE's demonstration of meeting the performance objectives of Part 61 during the FTF closure process. DOE considered the NRC assumptions, conclusions, and recommendations in the TER. DOE conducted a number of studies before issuing the Final FTF waste determination and basis document in March 2012 and submitting the documents to the NRC by letter dated April 17, 2012.

In its monitoring role under NDAA, NRC finalized Revision 0 of the monitoring plan for the SRS FTF in January 2013. This onsite observation guidance was developed in accordance with the January 2013 monitoring plan to ensure consistency in NRC staff monitoring activities. The January 2013 monitoring plan is available in NRC's Agency-wide Document Access and Management System (ADAMS) at accession number ML12212A192.

Enclosure

OBSERVATION REQUIREMENTS:

This NRC onsite observation visit of the disposal actions taken by 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). Ensuring protection of individuals during operations depends, in part, on proper implementation of work activities associated with installation and removal of tank equipment, waste retrieval, waste tank sampling, and grout placement. Ensuring protection of the general population, protection of inadvertent intruder, and disposal site stability predicates heavily on the performance of closed tanks and ancillary facilities. The staff will observe features important to impeding migration of or access to residual tank waste and will use the following guidance to direct the observation while visiting the SRS FTF facility.

Observation and Technical Review of Activities Related to Near-Term Closure Activities:

NRC plans to conduct the following activities during this onsite observation visit (and next to each activity is the associated monitoring factor (MF) from the January 2013 monitoring plan):

1. Observe grouting and discuss grout formula, development, and testing documentation for FTF Tanks 5/6 (MF 3.4);
2. Observe implementation of radiation protection program, including as low as reasonably achievable (ALARA), and air monitoring (MFs 7.1, 7.2, and 7.3); and
3. Discuss technical reviews for FTF related to Tanks 5/6 closure, including the review of the Tanks 5/6 special analysis, final inventory development, and §61.41 ALARA (MFs 1.1, 1.2, 1.3, and 1.5).

Follow-On Activities from Previous Onsite Observation Visits and Clarifying Technical Teleconference Calls:

The objectives of this monitoring activity include reviewing documents and engaging in discussions on the following topics:

1. From Observation 2013-01, Industrial Hygiene Monitoring Plan for FTF Tanks 18/19;
2. From Observation 2013-01, FTF Tanks 18/19 Final Configuration Report;
3. From Observation 2013-01, tank release documentation (e.g., FTF Tank 8), as it relates to potential vulnerabilities in the FTF tank system; and
4. Follow-on Action Items from May 1, 8, and 15, 2013, clarifying technical teleconference calls.

Completion of any item is dependent on either DOE performing the activity and/or the availability of the documentation during the onsite observation visit.