



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 5, 2017

Mr. Rob Seifert, Acting Director
Regulatory, Intergovernmental,
and Stakeholder Engagement
Office of Environmental Management
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

SUBJECT: CLOSURE OF MONITORING FACTORS IN THE 2013 U.S. NUCLEAR
REGULATORY COMMISSION SALTSTONE DISPOSAL FACILITY
MONITORING PLAN (DOCKET NO. PROJ0734)

Dear Mr. Seifert:

The purpose of this letter is to inform both the U.S. Department of Energy (DOE) and the South Carolina Department of Health and Environmental Control (SCDHEC) that the U.S. Nuclear Regulatory Commission (NRC) has decided to close 6 of the 73 specific monitoring factors (MFs) in the 2013 NRC Monitoring Plan for the Savannah River Site (SRS) Saltstone Disposal Facility (SDF), which is available via the NRC's Agencywide Documents Access and Management System (ADAMS) at Accession No. ML13100A113. As required by Section 3116(b) of the *Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005* (NDAA), the NRC, in coordination with the SCDHEC, monitors the DOE disposal actions at both the SRS SDF and the SRS Tank Farms (i.e., combined F-Tank Farm and H-Tank Farm).

On March 23, 2017, the NRC issued *Technical Review Report Saltstone Waste Form Hydraulic Performance* (ADAMS Accession No. ML17018A137), which was related to Monitoring Area (MA) 3 (Waste Form Hydraulic Performance) and MA 10 (Performance Assessment Model Revisions) from that Monitoring Plan. The NRC Technical Review Report (TRR) was based on the NRC staff review of 14 primary DOE documents. In the NRC TRR, the technical staff recommended to close MFs in MA 3, but, did not recommend closing any MFs in MA 10.

In that TRR, the NRC technical staff recommended closing MF 3.01 (Hydraulic Conductivity of Field-Emplaced Saltstone) under both Title 10, *Code of Federal Regulations* (10 CFR) Part 61 Performance Objective (PO) §61.41 (Protection of the General Population from Releases of Radiation) and PO §61.42 (Protection of Individuals from Inadvertent Intrusion) (i.e., two specific MFs). The reason for that recommendation was that the NRC determined that research results provided by the DOE were adequate to support the assumed initial hydraulic conductivity of field-emplaced saltstone in both the DOE SDF Fiscal Year (FY) 2013 and FY 2014 Special Analysis Documents (ADAMS Accession Nos. ML14002A069 and ML14316A586).

The NRC technical staff recommended closing MF 3.02 (Variability of Field-Emplaced Saltstone) under both 10 CFR Part 61 PO §61.41 and PO §61.42 (i.e., two specific MFs). The reasons for that recommendation were: (1) the DOE final research results provided to the NRC in early Calendar Year 2017, in particular the measured properties of saltstone core samples,

provided significant insight into variability of field-emplaced saltstone; (2) the NRC determined that the production, placement, and curing conditions that could cause significant variability in saltstone performance were well-controlled by the DOE and the NRC did not expect the variability in those conditions to result in significant variability of field-emplaced saltstone; and (3) the NRC determined that the DOE process to evaluate variability due to potential future changes was adequate to assess and control saltstone variability.

The NRC technical staff recommended closing MF 3.04 (Effect of Curing Temperature on Saltstone Hydraulic Properties) under both 10 CFR Part 61 PO §61.41 and PO §61.42 (i.e., two specific MFs). The NRC determined that the DOE research results since the DOE 2009 SDF Performance Assessment demonstrated that the effects of curing conditions were adequately accounted for in the assumed initial hydraulic conductivity and effective diffusivity values.

Based on the TRR recommendations, the NRC determined that the DOE has provided sufficient information to close those six specific MFs in the Monitoring Plan.

As described in Tables 1-6, 1-7, and 1-8 of the Monitoring Plan, those MFs are High Priority MFs in the Monitoring Plan. Also, those are the first MFs to be closed in the Monitoring Plan.

In future letters closing MFs in the Monitoring Plan, the NRC will include a table that summarizes which of the 73 specific MFs in the Monitoring Plan are closed.

Also, in the TRR, the NRC technical staff recommended narrowing the scope of MF 3.03 (Applicability of Laboratory Data to Field-Emplaced Saltstone) under both PO §61.41 and PO §61.42 to understanding of the short term (i.e., within the first several pore volumes) changes in the hydraulic conductivity between laboratory-prepared and field-emplaced saltstone samples. That change to narrow the focus of MF 3.03 will be reflected in the next revision to the SDF Monitoring Plan.

R. Seifert

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If you have any questions or need additional information regarding NRC NDAA monitoring at the DOE SRS SDF, please contact Mr. Harry Felsher of my staff at Harry.Felsher@nrc.gov or at (301) 415-6559.

Sincerely,

/RA/

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Docket No. PROJ0734

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R. Seifert

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