

August 30, 2012

Mr. Mark Gilbertson  
Deputy Assistant Secretary for Site Restoration  
Office of Environmental Management  
U.S. Department of Energy  
1000 Independence Avenue, S.W.  
Washington, DC 20585

SUBJECT: DISTRIBUTION OF NUREG-1911, REVISION 4, "NRC PERIODIC COMPLIANCE MONITORING REPORT FOR U.S. DEPARTMENT OF ENERGY NON-HIGH-LEVEL WASTE DISPOSAL ACTIONS; ANNUAL REPORT FOR CALENDAR YEAR 2011"

Dear Mr. Gilbertson:

Enclosed is the U.S. Nuclear Regulatory Commission (NRC) staff's report of its monitoring of U.S. Department of Energy (DOE) non-high-level waste disposal actions in calendar year (CY) 2011, pursuant to Section 3116(b) of the National Defense Authorization Act for Fiscal Year 2005 (NDAA). The NRC staff has prepared this report in accordance with NUREG-1854, "NRC Staff Guidance for Activities Related to DOE Waste Determinations," issued August 2007. This report is the fourth annual report developed by NRC staff pursuant to the NDAA.

As described in the Executive Summary of NUREG-1911, Revision 4, the NRC's staff monitoring in CY 2011 was based on two monitoring plans that it completed in accordance with the guidance in NUREG-1854. The monitoring plans covered DOE disposal actions at the Saltstone Facility at the Savannah River Site (SRS) in South Carolina and the Tank Farm Facility at the Idaho Nuclear Technology and Engineering Center at the Idaho National Laboratory (INL) in Idaho. The NRC is preparing a revision to the Saltstone Facility monitoring plan in response to its review of the 2009 Performance Assessment (2009 PA) for the Saltstone Facility at the SRS. This revision began in CY 2012, following the publication of the *Technical Evaluation Report for the Revised Performance Assessment for the Saltstone Disposal Facility at the Savannah River Site, South Carolina* (ADAMS Accession No. ML121170309) documenting the NRC's review of the 2009 Saltstone PA. Similarly, the NRC issued a *Technical Evaluation Report for the F-Area Tank Farm Facility at the Savannah River Site, South Carolina* in October 2011 (ADAMS Accession No. ML112371715), and will be developing a monitoring plan for the F-Area Tank Farm at the SRS. The NRC plans no revisions to the INL monitoring plan in response to monitoring activities in CY 2011.

In CY 2007, the staff identified three open issues regarding disposal actions at the SRS Saltstone Facility, one of which was closed in CY 2008 (2007-3) regarding the risk significance of as-built vault conditions. In last year's report (for CY 2010), open issues 2007-1, 2007-2, and 2009-1 remained open at the close of the calendar year. In 2011, as in 2010, the staff observed that DOE is continuing to collect data in attempts to provide support for assumptions that were used in DOE's performance assessment in support of the Saltstone facility waste determination.

Because this effort was still on-going at the end of CY 2011, Open Issues 2007-1, 2007-2, and 2009-1 remain open.

The NRC staff concludes in the attached Annual Monitoring Report that it had reasonable assurance throughout CY 2011 that salt waste disposal at the Saltstone facility would meet the performance objectives of 10 CFR Part 61 provided certain assumptions in DOE's analyses were verified during monitoring. This conclusion was based on the observation visits conducted in CY 2011 and NRC's review of DOE's 2005 PA for the Saltstone facility that was documented in NRC's December 2005 Technical Evaluation Report (ADAMS Accession No. ML053010225). Subsequent to the time covered by the attached Annual Monitoring Report for CY 2011, the NRC staff concluded its review of the 2009 PA and has conveyed concerns to DOE in a Letter of Concern (Type IV) dated April 30, 2012 (ADAMS Accession No. ML120650576). Currently, the NRC does not have reasonable assurance that the proposed salt waste disposal at the Saltstone facility meets the performance objectives and has concluded that the performance objective in 10 CFR 61.41 for protection of the general population from releases may be exceeded by DOE's current proposed disposal activities for salt waste. Although the NRC staff cannot conclude that the performance objective in 10 CFR 61.41 is met, 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 10 CFR 20.1301). The NRC does continue to have assurance that the remaining three performance objectives, 10 CFR 61.42 through 10 CFR 61.44 are being met.

In accordance with the requirements of the NDAA and consistent with the NRC's monitoring plans, the NRC staff will continue to monitor DOE disposal actions at SRS and INL. The monitoring activities are expected to be an iterative process and several onsite observation visits and technical reviews of various reports, studies, and other documents may be necessary to obtain the information needed to close all of the current open issues, as well as issues that may be opened in the future.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

M. Gilbertson

3

If you have any questions, please contact me at (301) 415-7437, or Nishka Devaser, Saltstone Facility Project Manager in the Division of Waste Management and Environmental Protection, at (301) 415-5196.

Sincerely,

**/RA/**

Larry W. Camper, Director  
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and Environmental Protection  
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and Environmental Management Programs

Enclosure:  
NUREG-1911, Rev. 4, "NRC Periodic  
Compliance Monitoring Report for  
U.S. Department of Energy  
Non-High-Level Waste Disposal Actions,  
Calendar Year 2011"

cc w/enclosure: See next page

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3

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2

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