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**NEW MEXICO
ENVIRONMENT DEPARTMENT**

Hazardous Waste Bureau

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Director
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EP2013-5003

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 31, 2012

Peter Maggiore
Assistant Manager, Env. Projects Office
Los Alamos Site Office, DOE
3747 West Jemez Rd, MS A316
Los Alamos, NM 87544

Jeffrey D. Mousseau, Associate Director
Environmental Programs
Los Alamos National Security, L.L.C.
P.O. Box 1663, MS M991
Los Alamos, NM 87545

**RE: APPROVAL WITH MODIFICATIONS
DRILLING WORK PLAN FOR REGIONAL AQUIFER WELL R-58
LOS ALAMOS NATIONAL LABORATORY
EPA ID#NM0890010515
HWB-LANL-12-022**

Dear Messrs Maggiore and Mousseau:

The New Mexico Environment Department (NMED) is in receipt of the United States Department of Energy (DOE) and the Los Alamos National Security, L.L.C.'s (collectively, the Permittees) document entitled *Drilling Work Plan for Regional Aquifer Well R-58 (Plan)* dated December 11, 2012 and referenced by EP2012-0271.

NMED has reviewed the Plan and hereby issues this approval with the following modifications.

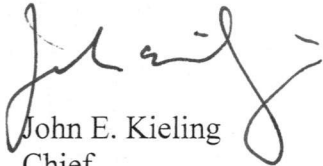
1. In order to optimize the detection of contaminants migrating with infiltrating alluvial groundwater in Fishladder and S-Site Canyons, the associated vadose-zone extending beneath these canyons, and releases from other contaminated sites at Technical Area 16, the Permittees must move the location of R-58 approximately 1500 feet to the east from its proposed location as shown on Figure 1 of the Plan. The present-day infiltration zones as depicted on Figure 1 do not necessarily reflect past saturated conditions, such as those in the 1960s, when contaminant (e.g., RDX) concentrations and effluent discharge volumes were



- likely much greater. As a result of these greater volumes of effluent discharges, the alluvial groundwater in these canyons likely extended much further to the east, expanding the zones of infiltration and the potential breakthrough points to the regional aquifer. The new location for R-58 should provide better detection monitoring capabilities for contaminants historically released from TA-16.
2. During drilling, the Permittees must minimize the downhole migration of drilling additives, such as foam, to the regional aquifer at R-58, and the well must be developed aggressively enough to obtain representative samples once R-58 is completed.
 3. In accordance with Section IV. A.3.e.iv of the March 1, 2005 Compliance Order on Consent (revised October 29, 2012), the Permittees must: a) submit a well completion summary fact sheet within 30 days of R-58 completion; b) develop the well within 30 days of completion; and c) submit the R-58 well completion report within 150 days of well completion.

The Permittees must complete R-58 by **September 30, 2013** and submit a well completion fact sheet no later than **October 30, 2013**, and a well completion report no later than **February 27, 2014**. Should you have any questions, please contact Michael Dale of my staff at (505) 661-2673.

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
N. Dhawan, NMED HWB
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File: Reading and LANL 2012, Drilling Work Plan R-58

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