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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

December 2, 2014

Peter Maggiore
Assistant Manager,
Environmental Projects Office
Los Alamos Field Office, DOE
3747 West Jemez Rd, MS A316
Los Alamos, NM 87544

Michael Brandt
Associate Director,
Environment, Safety, Health
Los Alamos National Laboratory
P.O. Box 1663, MS K491
Los Alamos, NM 87545

**RE: EVALUATION OF REGIONAL WELL R-61
LOS ALAMOS NATIONAL LABORATORY
EPA ID#NM0890010515
HWB-LANL-14-044**

Dear Messrs. Maggiore and Brandt:

The New Mexico Environment Department (NMED) has received the United States Department of Energy (DOE) and the Los Alamos National Security, L.L.C.'s (LANS) (collectively, the Permittees) *Evaluation of Regional Well R-61*, dated June 2014 and referenced by EP2014-0156 (Report). The Report was received on June 23, 2014. NMED has reviewed the Report and provides the following comments.

As highlighted in the Permittee's drilling work plan (Attachment B) for R-61, the well was installed to define the vertical and lateral extent of chromium contamination in the regional drinking-water aquifer and for long-term water-quality monitoring purposes. NMED approved the work plan on November 4, 2010 (Attachment A). The well was installed in 2011 and is sited south of the primary chromium plume located in the vicinity of well R-42.

The drilling work plan for R-61 states that "[n]o drilling fluids will be used within 100 ft of the regional aquifer, except potable municipal water." In contrast to the requirement not to use drilling fluids in the regional aquifer, fluids were used while drilling within 100 feet (ft) of the regional aquifer to a depth approximately 165 ft below the regional aquifer water table. The use of drilling fluids in the regional aquifer resulted in severe damage to



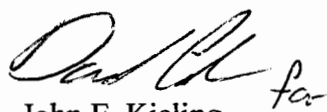
the aquifer in and around the well location. Changes in the natural or ambient oxidation-reduction geochemical environment are evidenced by the strongly reducing conditions of groundwater at and between screens 1 and 2. The impact to sample quality and representativeness of groundwater is documented in this Report and several other documents provided by the Permittees (e.g., LANL, EP2012-0077, EP2013-0019, EP2013-0068).

The Report, as well as other relevant data and information, indicates that well R-61 is not reliable for groundwater monitoring and contaminant-detection purposes. Groundwater samples collected at R-61 for contaminant monitoring and detection do not meet requirements included in the March 2005 Consent Order (e.g., Section IX.B.2.i.ii) and United States Environmental Protection Agency (USEPA) RCRA regulations 40 C.F.R. Part 264.101 and associated technical guidance documents, such as "RCRA Ground-Water Monitoring Technical Enforcement Guidance Document" (USEPA, 1986) and "RCRA GROUND-WATER MONITORING: DRAFT TECHNICAL GUIDANCE" (USEPA, 1992). Therefore, NMED cannot accept water-quality data from R-61, and the well must be replaced as previously directed in NMED's letter dated May 7, 2013.

NMED's May 7, 2013 letter required that the Permittees submit a well-replacement drilling work plan for R-61 by June 14, 2013. On May 28, 2013, the Permittees submitted an extension request to complete the R-61 replacement drilling work plan. On June 7, 2013, NMED approved the extension request requiring that the R-61 replacement drilling work plan be submitted by September 30, 2014. The Permittees must provide NMED a drilling work plan for the replacement of regional well R-61 by **February 2, 2015**.

Please contact Michael Dale at (505) 661-2673 if you have questions.

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

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File: Reading and LANL 2014, R-61 Evaluation Report