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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

August 29, 2016

Doug Hintze
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Michael T. Brandt
Associate Director
Environment, Safety, Health
Los Alamos National Laboratory
P.O. Box 1663, MS M991
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**RE: APPROVAL WITH MODIFICATIONS
INTERIM FACILITY-WIDE GROUNDWATER MONITORING PLAN FOR
THE 2017 MONITORING YEAR, OCTOBER 2016-SEPTEMBER 2017
EPA ID#NM0890010515
HWB-LANL-16-027**

Dear Messrs. Hintze and Brandt:

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 *Interim Facility-Wide Groundwater Monitoring Plan for the 2017 Monitoring Year, October 2016-September 2017 (Plan)* dated May, 2016 and referenced by EP2016-0045. The Plan was received on May 25, 2016. NMED has reviewed the Plan and hereby issues this approval with the following modifications.

Modifications:

1. Table 1.3-1, Periodic Monitoring Report Submittal Schedule for MY 2017, page 43

The Periodic Monitoring Report (PMR) scheduling information found in Table 1.3-1 of the Plan is presented in an unclear manner. Specifically, it is uncertain which monitoring and/or sampling event(s) will be incorporated or linked to the associated Periodic Monitoring Report (PMR) submittal dates. The Permittees must submit to NMED a replacement page for Table 1.3-1 that clearly identifies the sampling-event campaigns to be documented in the associated PMR. The replacement page for Table 1.3-1 must be submitted to NMED by **October 1, 2016**.

2. Table 2.4-1, Interim Monitoring Plan for TA-21 Group, page 53

Table 2.4-1 indicates that the Permittees plan to sample regional aquifer well R-6 for volatile organic compounds (VOCs) on a biennial frequency. R-6 is located downgradient of several subsurface release sites (e.g., MDA T) where VOCs are known to be present and considered a primary contaminant of concern with respect to vapor-phase transport to perched-intermediate groundwater and/or the regional aquifer. Therefore, the Permittees must collect groundwater samples at R-6 for VOC analysis on an annual basis during the 2017 monitoring year. The Permittees must submit to NMED a replacement page for this change to Table 2.4-1 by **October 1, 2016**.

3. Table 6.4-1, Interim Monitoring Plan for TA-16 260 Group, page 58

The Permittees propose to collect and analyze groundwater samples at CdV-R-37-2 screen 2 (S2) semiannually for metals, VOCs, high explosive compounds, and general inorganics; annually for low-level tritium; and biennially for radionuclides and semi-volatile organic compounds. Past water-quality and field-parameter data collected from S2 indicate that the well does not produce representative samples at purge quantities exceeding three casing volumes. The damage to S2 in terms of the unstable reactive geochemistry along the screened interval appears to be irreversible; therefore, the Permittees must reduce the purge amount at S2 to three casing volumes followed by the collection of a limited analytical suite including low-level tritium and high explosive compounds using method SW-846:8321A_MOD, as well as reduce the sampling frequency to annually. The Permittees must submit to NMED a replacement page for this change to Table 6.4-1 by **October 1, 2016**.

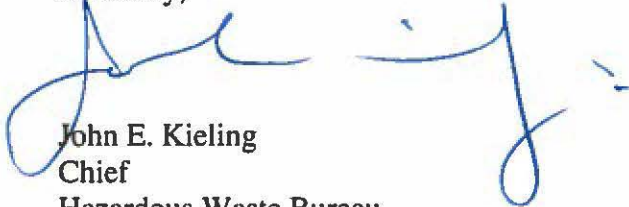
4. Table E-1.0-1, Watch List for Deep Monitoring Wells, page E-10

The Permittees have included regional wells R-58 and R-67 as part of a “watch list” presented in Appendix E, Table E-1.0-1 of the Plan. The Permittee’s “watch list” identifies certain wells that are suspect in terms of producing representative samples and describes specific approaches, or “Actions” as stated in the Plan, for tracking performance of each well on the “watch list”. R-58 and R-67 are included in the list because water-quality data

collected at these wells suggest that they do not produce representative samples. The "Actions", as presented in Table E-1.0-1, taken for R-58 and R-67 are limited to "Purge and sample per the Interim Plan," which does not provide sufficient detail on the proposed sampling method considering the current condition of these wells. The Permittees must propose a modified sampling protocol, such as extended purging, for R-58 and R-67 that will assess the performance of each well and potentially enhance the representativeness of sampling results collected at each well. The Permittees must present and propose an acceptable modification(s) in sampling protocol for R-58 and R-67. The modification(s) must be submitted via replacement page for Table E-1.0-1, that describes each action taken to address sample representativeness, to NMED by **October 1, 2016**.

Please contact Michael Dale at (505) 476-3078 if you have questions.

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

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File: Reading and LANL 2016, IFGMP 2017 MY, LANL-16-027

