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Cabinet Secretary

J. C. BORREGO
Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

May 12, 2017

Doug Hintze
Manager
Environmental Management
Los Alamos Field Office
3747 West Jemez Rd, MS A316
Los Alamos, NM 87544

Bruce Robinson
Program Director
Environmental Remediation Program
Los Alamos National Laboratory
P.O. Box 1663, MS M991
Los Alamos, NM 87545

**RE: APPROVAL WITH MODIFICATION
WELL COMPLETION REPORT FOR CHROMIUM PLUME CONTROL
INTERIM MEASURE AND PLUME-CENTER CHARACTERIZATION
INJECTION WELLS CrIN-1, CrIN-2, CrIN-3, CrIN-4, AND CrIN-5
EPA ID#NM0890010515
HWB-LANL-17-013**

Dear Messrs. Hintze and Robinson:

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 *Well Completion Report for Chromium Plume Control Interim Measure and Plume-Center Characterization Injection Wells CrIN-1, CrIN-2, CrIN-3, CrIN-4, and CrIN-5* (Report) dated March, 2017 and referenced by EP2017-0006. The Report was received on March 28, 2017. NMED has reviewed the Permittees' Report and hereby issues this Approval with the following modifications.

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General Comment:

1. All forthcoming well-completion reports submitted by the Permittees must include an updated water-level or water-table map that accounts for the most recent head data collected at the subject well(s) associated with the completion report and measured heads at all wells located within a one-mile radius of the subject well(s). The plan-view area of the required maps must encompass a one-mile radius surrounding the subject well(s).

Appendix D: Analysis of CrIN Pumping Test Data

2. Specific to all forthcoming well-completion reports, the Permittees must:
 - Include specific capacity results as calculated from discharge and pressure response data collected during step-drawdown testing and subsequent aquifer test. Specific capacity results must be presented in table format along with other hydraulic-properties data (e.g., transmissivity).
 - Utilize the specific capacity data to calculate an estimated hydraulic conductivity (K) for each zone(s) tested. The estimated K result(s) must be derived through the application of one or more common techniques or methods (e.g., Brons and Marting, 1961; Ferris et al., 1962). The estimated K values derived from the specific-capacity data must be presented in table format along with the calculated K values using the Neuman and Theis models.
 - Provide uncertainties or errors for each aquifer-property/parameter result. The calculated and/or estimated uncertainties must be included in table format (e.g., Table D-16).
 - Provide descriptive analyses comparing the hydraulic conductivity results as derived from the different methods and/or models.
 - Provide general descriptions concerning pressure responses at surrounding wells due to pumping at the subject well(s) and provide the measured drawdowns at the surrounding wells. The drawdown data must be presented in table format.

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Messrs. Hintze and Robinson
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Please contact Michael Dale at (505) 476-3078 if you have questions concerning this approval.

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

cc: N. Dhawan, NMED HWB
M. Dale, NMED HWB
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File: Reading and LANL 2017, Completion Report CrIN Wells

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