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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

December 3, 2015

Jeffrey P. Harrell
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Peter Davies
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Sandia National Laboratories
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**RE: DISAPPROVAL
TREATABILITY STUDY WORK PLAN FOR IN-SITU BIOREMEDIATION AT
THE TECHNICAL AREA-V GROUNDWATER AREA OF CONCERN,
SEPTEMBER 2015
SANDIA NATIONAL LABORATORIES
EPA ID#NM5890110518
HWB-SNL-15-020**

Dear Mr. Harrell and Mr. Davies:

The New Mexico Environment Department (NMED) has received the document *Treatability Study Work Plan for In-Situ Bioremediation At the Technical Area-V Groundwater Area of Concern, September 2015* (hereafter referred to as the “Work Plan”) with cover letter dated October 20, 2015, and submitted by the U.S. Department of Energy on behalf of itself and Sandia Corporation (collectively, the Permittees). NMED has reviewed the Work Plan and hereby issues this Disapproval with the following comments:

1. Section 4.2.2, KB-1 Primer, page 4-9

Permittee’s Statement: “One tank will be inoculated with a small amount of soil core/cuttings from the injection well screened interval and have KB-1® Primer added. If sufficient core/cuttings are not recovered during drilling, a commercial lyophilized

bacterial septic tank amendment (e.g., Rid-X[®] Septic System Treatment or equivalent) may be substituted at a mass/volume based on manufacturer recommendations.”

NMED's Comment: The purpose of adding soil cuttings from the injection well screened interval or septic tank amendments to the substrate solution is not mentioned. Describe the purpose of adding the soil core/cuttings or septic tank amendment into the first mixing tank in a revision to the Work Plan.

2. Section 5.2, Well Installation

NMED's Comment: There is no mention of well surveying in this section. A section must be added to the Work Plan in accordance with Section 8.10.2.5 of the Permit. The section must include language similar to the following: The new monitoring and injection wells will be surveyed relative to a U.S. Geological Survey (USGS) or other permanent benchmark. Survey data shall include northing, easting and elevation to the nearest hundredth of a foot or in accordance with the "Minimum Standards for Surveying in New Mexico" (12.8.2 NMAC). A survey elevation will be established at the top-of-casing, with a permanent marking indicating the point of survey. The survey will be completed and certified by a licensed New Mexico professional surveyor.

3. Section 5.2.4, Well Construction, page 5-8

Permittee's Statement: “To prevent overloading, the bentonite grout will be installed in multiple lifts. The first lift will be approximately 100-ft thick and will be allowed to set a minimum of 24 hours before placement of the next lift. Subsequent lifts will each be approximately 200-ft thick and brought to within 50 ft below grade.”

NMED's Comment: The filter pack, bentonite pellet seal, and bentonite grout must be emplaced by a tremmie pipe to prevent bridging. Lifts must be no more than 100 feet. Revise the Work Plan accordingly.

4. Section 5.2.4, Well Construction, page 5-8

NMED's Comment: Cores and cuttings of the injection wells and monitoring wells should be kept in storage by the Permittees in order to allow further study, if needed, by the Permittees or NMED. Revise the Work Plan accordingly.

5. Section 5.4.3, Push/Pull Test at TAV-INJ-1, page 5-17

Permittee's Statement: “Results of the push/pull test and any associated revisions to procedures will be communicated to the NMED-HWB prior to proceeding with full-scale injection at TAV-INJ1.”

NMED's Comment: It is unclear if the results of the push/pull test and associated revisions will be submitted to NMED in written form. The Permittees must submit a

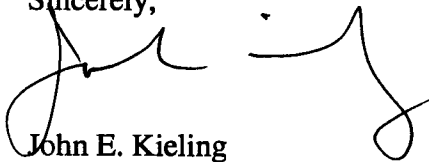
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written report to NMED that includes well construction, lithologic logs, documentation of field activities, and results of the push/pull test at least 60 days prior to starting the full Phase I activities of the Treatability Study. Revise the Work Plan accordingly.

A revised Work Plan that corrects all of the deficiencies noted in this Disapproval must be submitted no later than **January 29, 2016**. The revised Work Plan must be accompanied by a response letter that details where the Disapproval comments were addressed and that cross-references NMED's numbered comments.

Please contact Ms. Naomi Davidson of my staff at (505) 222-9504 or at the address indicated in the letterhead of this letter if you have any questions on this matter.

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
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