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CERTIFIED MAIL – RETURN RECEIPT REQUESTED

March 30, 2017

Doug Hintze, Manager
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U1700522

RE: APPROVAL WITH MODIFICATIONS
INVESTIGATION WORK PLAN FOR LOWER WATER/INDIO CANYONS AGGREGATE AREA
LOS ALAMOS NATIONAL LABORATORY
EPA ID#NM0890010515
HWB-LANL-16-029

Dear Messrs. Hintze and Robinson:

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) *Investigation Work Plan for Lower Water/Indio Canyons Aggregate Area* (Work Plan), dated June 2016 and referenced by LA-UR-16-24247/EP2016-0079. The Work Plan was received on June 22, 2016.

The Lower Water/Indio Canyon Aggregate Area is located within Technical Area (TA)-15 and TA-49 and includes a total of 11 sites, 6 of which require additional sampling and investigation. The Permittees report that TA-15 (also known as R-Site) has been used since the 1940s to present for high-explosives (HE) research, development, and testing.

NMED has reviewed the Work Plan and hereby issues this Approval with Modifications. The following comments must be implemented by the Permittees as part of the proposed investigation activities and reporting for the Lower Water/Indio Canyons Aggregate

Area.

General Comments:

1. The Permittees propose Method 8321A to be used for the analysis of HE. Typically, EPA SW Method 8330 is the default method for explosives. Based on the history of solid waste management units (SWMUs) and areas of concern (AOCs) at TA-15 and because the exact nature of the materials used during tests at firing sites is not known, the Permittees must ensure that Method 8321A is modified to detect all explosive compounds (including propellants, pyrotechnics, and degradation products) potentially present at the firing sites.

2. The Permittees do not include semi volatile organic compounds (SVOCs) in the analytical suites for several of the sites addressed in the Work Plan even though the exact nature of the materials used at Firing Site H and the specific materials present in the buildings associated with the other sites are unknown. Furthermore, at two firing sites in TA-14 (AOC 14-001(g) and SWMU 14-002(c)), SVOCs were previously detected at several locations. Not analyzing for SVOCs at some sites may result in a data gap, therefore, the Permittees must propose to include SVOCs in the analytical suites for the following sites: AOC 15-004(h), SWMU 15-009(g), AOC 15-014(d), and AOC 15-014(l).

Specific Comments:

3. **Section 4.2 AOC 15-004(h), Firing Site H, page 12:**

   a. **NMED Comment:** The Permittees state that firing site operations ceased in 1953 and that soil west of AOC 15-004(h) was excavated to install an access road to the Pulsed High Energy Radiographic Machine Emitting X-rays (PHERMEX) facility (1959-1961). The Permittees do not provide information on where the excavated soil was disposed of. Given that historic sample 15-02362, located less than 100 feet from the access road, had detections of uranium (510 mg/kg and 113 mg/kg) well above the background value (1.82 mg/kg), it is likely that the soil was impacted by firing site activities prior to being excavated. The Permittees must provide information, if available, about the final disposition of the soil excavated during the construction of the access road.

   b. **Permittees Statement:** *The camera chamber and the concrete pad remain on-site, but the concrete pad has been partially covered with fill.*

      NMED Comment: The Permittees propose to collect samples from around the perimeter of the concrete pad but not the fill that partially covers the pad. The Permittees must provide information, if available, on the source of the fill covering the concrete pad and must collect samples of the fill at a minimum of

two depths from two locations. The Permittees must also assess the condition of the pad beneath the fill to the extent possible given the presence of trees growing on top of the pad. If the concrete pad is found to be fractured, additional sampling may be required from locations beneath the pad.

4. **Section 4.3.3, SWMU 15-009(g), Proposed Activities, pages 13-14:**

   NMED Comment: Wherever possible, the Permittees must collect samples from beneath drainline junctions.

5. **Section 4.4.3, AOC 15-014(d), Proposed Activities, page 15:**

   NMED Comment: The list of analytes proposed for AOC 15-014(d) on page 15 does not include polychlorinated biphenyls (PCBs), however, Table 4.4-1 does. The Permittees must ensure that PCBs are included in the analytical suite.

6. **Section 4.5.3, SWMU 15-014(l), Proposed Activities, page 15:**

   a. **NMED Comment:** The Permittees propose to collect samples along the drainlines into and out of the drop inlet at SWMU 15-014(l). If a catch basin exists beneath the drop inlet, the Permittees must provide a description of the design and current condition of the catch basin.

7. **Section 5.7, Quality Assurance/Quality Control Samples, page 20:**

   NMED Comment: NMED notes that the reference "Section IX.C.3.b" of the Consent Order (2005) was correct at the time this letter was originally sent to NMED, but has since changed to "Appendix F, I.B.4.f" in the new Consent Order (2016).

Please contact Robert Murphy at (505) 476-6059 should you have any questions or comments.

Sincerely,

John E. Kieling
Chief
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File: Reading and LANL 2017, TA-15, Approval with Modifications Lower Water/Indio Canyons Aggregate Area Work Plan