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NEW MEXICO
ENVIRONMENT DEPARTMENT

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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 3, 2011

George J. Rael, Assistant Manager
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Los Alamos Site Office
Department of Energy
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Los Alamos, NM 87544

Michael Graham
Associate Director Environmental Programs
Los Alamos National Security, L.L.C.
P.O. Box 1663, MS 991
Los Alamos, NM 87545

RE: APPROVAL WITH MODIFICATIONS FOR THE INVESTIGATION WORK PLAN FOR CHAQUEHUI CANYON AGGREGATE AREA, REVISION 1
LOS ALAMOS NATIONAL LABORATORY (LANL)
EPA ID #NM0890010515
HWB-LANL-09-072

Dear Messrs. Rael and Graham:

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 Chaquehui Canyon Aggregate Area, Revision 1* (Work Plan), dated November 2010 and referenced by LA-UR-10-7226/EP2010-0485 and the supplemental *Response to the Notice of Disapproval for the Investigation Work Plan for Chaquehui Canyon Aggregate Area, Revision 1,* (Response) dated February 2011 and referenced by LA-UR-11-0920/EP2011-0060. NMED has reviewed the Work Plan and Response and pursuant to Section III.M.2 of the March 1, 2005 Order on Consent, hereby issues this Approval, with the following modifications:

(Note: Comment numbers refer to NMED's Notice of Disapproval (NOD) dated January 13, 2011)

1) NMED concurs with the Permittees' assessment of definition of vertical extent of contaminants under this comment. Many of the constituents were included based on the results provided in the report tables. In future submittals, where the Permittees assert that vertical extent has been defined, the deepest sample, which may be non-detect, must be included in the tables of results. In addition to samples exceeding the SSLs, SALs, BVs, or FVs, Tables 4.1-2, 4.1-3, and 4.1-4 should include non-detect samples that are essential to demonstration that vertical extent has been defined.

For sampling location 33-01328, the Permittees state in the Response that "[o]nly the sample from the 10 to 15 ft bgs interval was analyzed for metals." The Work Plan, on the other hand, states that, "In addition, three samples collected within the first 15 ft were analyzed for uranium, isotopic plutonium, metals, VOCs, and SVOCs." Similarly, for sampling location 33-01697, the Permittees state in the Response that, "[o]nly the sample from the 10 to 12.5 ft bgs interval was analyzed for metals and semivolatile organic compounds (SVOCs)." The Work Plan states that, "In addition, three samples collected within the first 12 ft were analyzed for tritium, metals, uranium, VOCs, and SVOCs." These inconsistencies must be resolved in the Investigation Report.

Modify the sampling suites for the sites and sampling locations listed below:

a) For SWMU 33-002(a), add tritium to the sampling locations 33-25112 and 33-25114.
b) For SWMU 33-002(b), add tritium to the sampling location 33-25084 and trichloroethene to the sampling location 33-25125.
c) For SWMU 33-002(c), add tritium to the sampling location 33-25085.

2) NMED concurs with much of the Permittees' rationale for excluding specific analyses from the analytical suites for various sites. However, bullet number 5 regarding the SWMUs at the South Site portion of TA-33 is not accurate because:

a) Tritium was detected at SWMU 33-006(a) (stated on page 55 of the Work Plan).
b) SWMU 33-004(b) may have received wastewater from SWMU 33-006(a) and has never been sampled for tritium.
c) SWMU 33-004(j) received runoff from SWMU 33-006(a) and has never been sampled for tritium.
d) SWMU 33-008(a) is a landfill with a variety of undocumented waste. Sampling results show that the waste contains hazardous components which have been released to media. The landfill has not been sampled for tritium, which could have been disposed of there.
e) SWMU 33-010(c) is a surface disposal area that received debris from SWMU 33-006(a) and has not been sampled for tritium.

f) SWMU 33-010(g) is a surface disposal area containing firing-site debris, likely contaminated with tritium, with no documentation. This site has not been sampled for tritium.
g) SWMU 33-010(h) is a surface disposal area containing firing-site debris, likely contaminated with tritium, with no documentation. This site has not been sampled for tritium.

Include tritium in the analytical suites for the following areas:

- SWMU 33-010(f)
- SWMU 33-004(a)
- AOC 33-008(c)
- SWMU-33-012(a)
- SWMU-33-004(b)
- SWMU-33-004(j)
- SWMU-33-006(a)
- SWMU-33-008(a)
- SWMU-33-010(c)
- SWMU-33-010(h)
- SWMU-33-010(g)

Include gamma spectroscopy in the analytical suite for SWMU 33-004(b). Include high explosives (HE) in the analytical suite for AOC C-33-003.

4) Sampling below the pads at SWMU 33-012(a) and AOC C-33-001 is required to fully characterize the extent of contamination at these sites. While runoff may also be a pathway for transport of contaminants, contaminants can also migrate through concrete via matrix or fracture flow to the media below. Coring through concrete to obtain samples is a relatively simple process, as is patching the holes. As stated in the NOD, a total of five samples are required for each site, four from within the pad footprints near each of the four sides and one from the center of each pad.

Please contact Ben Wear at (505) 476-6041 should you have any questions.

Sincerely,

James P. Bearzi
Chief
Hazardous Waste Bureau

cc: R. Solomon, Acting Director, NMED WWMD
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File: LANL '11, TA-33

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