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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

August 28, 2008

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**RE: NOTICE OF DISAPPROVAL
INVESTIGATION WORK PLAN FOR UPPER CAÑADA DEL BUEY
AGGREGATE AREA
LOS ALAMOS NATIONAL LABORATORY
EPA ID #NM0890010515
HWB-LANL-08-013**

Dear Messrs. Gregory and McInroy:

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 Upper Cañada del Buey Aggregate Area* (Plan), dated June 2008 and referenced by LA-UR-08-3864/EP2008-0287. NMED has reviewed the Plan and hereby issues this Notice of Disapproval (NOD).

General Comments:

Comment 1: At each site undergoing investigation, 20 percent of all samples must be submitted for laboratory analysis of polychlorinated biphenyls (PCBs). The selected samples must be

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biased toward areas where field screening indicates the greatest presence of contamination or areas with the highest potential for contamination (*e.g.*, closest to the contamination source).

Comment 2: Table 7.0-2, page 141, includes a listing of 27 metals to be analyzed and the listing summary indicates the metals are the Target Analyte List (TAL) metals under US EPA's current Contract Laboratory Program. The current TAL includes 23 metals (found at <http://www.epa.gov/superfund/programs/clp/target.htm>). The table listing in the Plan includes boron, lithium, silicon, titanium and uranium which are not included in the current TAL and the table does not include mercury which is on the current TAL. If the Permittees wish to retain the metals listed in Table 7.0-2, mercury must be added to the table's list.

Comment 3: All Plan figures should be reviewed to ensure applicable area canyon drainage features are illustrated on the figures, similar to the figures recently provided in the July 2008 Upper Sandia Canyon Aggregate Area Investigation Work Plan, Revision 1. The review may help the Permittees in determining whether sample location coverage for the various Areas of Concern (AOCs) and Solid Waste Management Units (SWMUs) addressed in the Plan overlaps sample coverage provided in other Los Alamos National Laboratory (LANL) aggregate area AOC and SWMU investigations.

Comment 4: Canyon drainage samples must be obtained in the drainages from the top of the slope to the toe of the colluvium. Sampling must target areas such as fine-grained sediments or other areas of sediment accumulation.

Specific Comments:

1. Section 5.1.2 Scope of Activities for SWMU 46-002, page 14, first paragraph:

Permittees' Statement: "Table 4.0-1 provides a summary of the proposed sampling strategy, locations, depths, and analytical suites."

NMED Comment: Table 4.0-1 contains a footnote that excludes analyses of isotopic thorium for each of the sampling locations at SWMU 46-002. The RFI Work Plan for OU 1140 (RFI Work Plan), page 5-54, lists thorium as a potential chemical of concern at SWMU 46-002. The Permittees must revise the table to include analyses of isotopic thorium for each sample collected at SWMU 46-002.

2. Section 5.6.2 Scope of Activities for SWMU 46-003(e), page 18, second paragraph:

Permittees' Statement: "Eight samples will be collected from four locations associated with the location of the former distribution box and drain field (Figure 5.6-2)."

NMED Comment: The Permittees must also collect samples adjacent to the area where the drain line exits Building 46-58. All samples must be analyzed for the same analytical suite as

proposed in Table 4.0-1 and must be collected from two depths to define the nature and the extent of contamination.

3. Section 5.7.2 Scope of Activities for SWMU 46-003(f), page 19, second paragraph:

Permittees' Statement: "Eight samples will be collected from four locations associated with the distribution box and drain field to define nature and extent of contamination (Figure 5.4-2)."

NMED Comment: Figure 5.4-2 shows a pipeline structure exiting the northeast corner of the site drain field. The Permittees have proposed a sample location at the north end of the structure. The Plan must be revised to clarify the nature and use of the structure. If the structure is an outfall associated with the drain field, the Permittees must propose additional down slope sampling locations north of the structure to characterize the area between the structure and the common drainage segment of SWSC Canyon.

4. Section 5.8.2 Scope of Activities for SWMU 46-003(g), pages 19 and 20, first and last paragraphs:

Permittees' Statements: "Two samples will be collected from one location below the tank (Figure 5.8-2)." and, "Four samples will also be collected from two locations beneath the primary and secondary inlet lines (Figure 5.8-2)."

NMED Comment: The Permittees must collect samples from beneath the inlet pipe, the tank inlet and tank outlet at two depths to define the nature and extent of contamination. Additionally, the proposed sample location just north of former structure 46-175 must be moved approximately 20 feet south to the piping bend located a few feet west of the former structure to address potential contamination. In the event underground or overhead utility lines preclude moving the sample location farther south, the Permittees must state the reason(s) for not moving the location in their response to the NOD. All samples must be analyzed for the analytical suites listed in Table 4.0-1 for the SWMU.

5. Section 5.11 SWMU 46-004(b), Former Tank, page 22, first line:

Permittees' Statement: "SWMU 46-004(b) is the location of a former alkali-metal cleaning tank (structure 46-81) (Figure 5.5-1)."

NMED Comment: Section 5.2.2 of the June 1996 *RFI Report for Potential Release Sites in TA-46* (1996 RFI) indicates the former tank historically occupied at least two locations at SWMU 46-004(b). Review of Figure 5.2.2-1 of the 1996 RFI indicates neither of the historical tank locations shown on that figure correspond with the location shown on Figure 5.5-1 of the Plan. The Permittees must explain why the tank location shown in the Plan figure differs from the locations shown on the 1996 RFI figure.

6. Section 5.15.1.2 Scope of Activities for SWMU 46-004(d), page 26:

Permittees' Statements: "Twelve samples will be collected from three locations, one down the center of and two adjacent to the dry well (Figure 5.6-2)." and, "In the event of auger refusal because of the presence of gravel/cobbles in the bottom of the well, an alternative location/borehole will be drilled downgradient of the well."

NMED Comment: The two proposed sample locations located adjacent to the dry well must be moved to a physically accessible transect location down slope of the dry well. See also, comment number 7 below. Samples must be analyzed for the same analytical suite as proposed in Table 4.0-1 and must be collected from two depths to define the nature and the extent of contamination. The Permittees must revise the Plan to provide for consulting NMED in the event auger refusal is encountered in the well bottom borehole.

7. Section 5.15.2.3 Scope of Activities for SWMU 46-004(e), page 26:

Permittees' Statements: "Twelve samples will be collected from three locations, one down the center of and two adjacent to the dry well (Figure 5.6-2).", "Samples will be collected from four depths (at the base of the well, and 5 ft, 10 ft, and 15 ft below the well)..." and, "In the event of auger refusal because of the presence of gravel/cobbles in the bottom of the well, an alternative location/borehole will be drilled downgradient of the well."

NMED Comment: Samples must also be collected from the area where the drain line exits the building. The proposed sample location north of and adjacent to the drywell must be moved to a physically accessible transect location down slope of the dry well. See also, comment number 6 above. Samples must be analyzed for the same analytical suite as proposed in Table 4.0-1 and must be collected from two depths to define the nature and the extent of contamination. Additionally, the Permittees must revise the Plan to provide for consulting NMED in the event auger refusal is encountered at the well bottom location.

8. Section 5.20.3, Scope of Activities for SWMU 46-004(m), page 35, first paragraph:

Permittees' Statement: "Twenty samples will be collected from 10 locations in the drainage at and below the outfall (Figure 5.12-2)."

NMED Comment: Section 5.5.1 of the 1996 RFI indicated "Except for the cooling water line from an air compressor, sinks and floor drains in TA-46-30 are clogged with debris and are unusable, but are not permanently plugged." Subsequent sampling below or adjacent to the drain line, between the outfall and building 46-30 has apparently not been conducted since the RFI field effort. Sample locations proposed for other SWMUs and AOCs addressed in the Plan do not provide coverage for the area between the outfall and Building 46-30. The Permittees must add a sample location between the SWMU 46-004(m) outfall and Building 46-30 to evaluate potential soil contamination below and adjacent to the drain line. The sample location must be

positioned to evaluate soil contamination below the drain line as close as possible to where the line exits from Building 46-30. As discussed during NMED's August 7, 2008 site visit, the other sample location proposed for SWMU 46-004(m) must be moved from the mouth of the outfall to approximately six feet east of the outfall. Samples from these locations must be collected at two depths and analyzed for the same constituents proposed for other locations at SWMU 46-004(m).

9. Section 5.22, SWMU 46-004(q), Outfall, page 36, first paragraph:

Permittees' Statement: "SWMU 46-004(q) is an outfall located north of building 46-58 (Figure 5.6-1)."

NMED Comment: Figure 5.21.11-3 of the 1996 RFI shows three outfalls (designated A, B and C) associated with SWMU 46-004(q). As illustrated on that figure, the three outfalls are shown as being approximately 25 feet from each other. The 1996 RFI and the associated RFI Work Plan indicate only one of the three outfalls (Outfall "B") was sampled during the RFI field effort. The figure indicates Outfall "C" was located at the end of a drain line which is shown as originating near the northwest corner of building 46-16. The 1996 RFI narrative indicates Outfall C was a two foot diameter culvert that received parking lot runoff from the northeast quadrant of TA-46. The RFI Work Plan and the 1996 RFI narratives indicate the source of Outfall B was unknown. Neither document discussed the nature and origin(s) of Outfall "A".

The proximity of the outfall associated with SWMU 46-004(h) suggests that this outfall may have been one of the three outfalls described above. If there are currently three (or two) outfalls still associated with SWMU 46-004(q), the Permittees must revise the Plan to include discussion of the nature and location of each outfall and propose sampling locations at appropriate depth intervals to characterize potential impacts associated with each outfall. If there is only one outfall currently associated with SWMU 46-004(q), the Permittees must revise the Plan to include discussion concerning the physical and/or administrative disposition of the other two outfalls identified in the 1996 RFI.

10. Section 5.32.2, Scope of Activities for SWMU 46-005, page 45, second paragraph:

Permittees' Statement: "Fourteen samples will be collected from seven locations within and next to the surface impoundments (Figure 5.8-2)."

NMED Comment: The northern impoundment (structure 46-171) is approximately 500 square feet larger than the southern impoundment (structure 46-170). The Permittees must revise the Plan (and associated figures) to move the proposed sample location from outside of and just east of the southern impoundment (structure 46-170) to a location south of the fence along the north side of the north impoundment (structure 46-171) to evaluate potential overflow from the impoundment. In addition, one of the proposed sample locations from the south impoundment must be moved to a location inside the northern impoundment to provide better sample coverage within the structure.

11. Section 5.36.3, Scope of Activities for SWMU 46-006(d), page 50, first paragraph:

Permittees' Statement: "Eight samples will be collected from four locations within the SWMU boundary along the north wall of building 46-31 (Figure 5.5-2.). Samples will be collected from two depths (2 to 3 ft and 4 to 5 ft)...".

NMED Comment: The Permittees must propose collection of revised sample depths (0 to 1 and 4 to 5 feet) in each of the four locations along the north building wall.

12. Section 5.46.3, Scope of Activities for SWMU 46-009(a), page 59, first and second paragraphs:

NMED Comment: Given the uncertainty concerning the nature of materials that may have been disposed in the landfill area, the Permittees must include analyses of total petroleum hydrocarbons (TPH) for samples collected within the landfill and from sample locations down slope of the landfill area. Alternatively, the Permittees may provide justification for why TPH analyses are not appropriate at this SWMU. Additional sample locations are needed in the SWSC Canyon drainage area shown on the lower right-hand corner of Figure 5.2-2 and east of the SWSC WWTP in the drainage area near the eastern boundary of Technical Area (TA) 46 as shown on Plate 1 of the Plan. See also, comment 13 below.

13. Section 5.47.2, Scope of Activities for SWMU 46-009(b), page 59, second paragraph:

Permittees' Statement: "Six samples will be collected from three mesa slope next to and downgradient of the former surface disposal area (Figure 5.1-2)."

NMED Comment: In addition to the three mesa slope locations shown on Figure 5.1-2 of the Plan, sample locations must be proposed in the eastward drainage located just south of the southernmost mesa slope location. The Permittees must ensure that samples are collected in the drainage to Cañada del Buey Canyon to define the nature and extent of contamination. See also, comment 12 above.

14. Section 5.48.3, Scope of Activities for SWMU 46-010(d), page 60, first and second paragraphs:

Permittees' Statements: "Four samples will be collected from two locations at the storage area (Figure 5.2-2)." and, "Six samples will be collected from three locations south and downgradient of the storage area (Figure 5.2-2)."

NMED Comment: The Permittees must revise the Plan and propose collection of samples from all sample locations and intervals to include analyses of TPH or provide justification for why TPH analyses are not appropriate at this SWMU.

15. Section 5.49.2, Scope of Activities for AOC C-46-001, page 61, second sentence:

Permittees' Statement: "Since the location of the spill is not well documented, indirect sampling of AOC C-46-001 is proposed."

NMED Comment: Given the uncertainty of where the spill occurred and the drainage patterns of the paved areas around Building 46-75, a multi-depth sample location is needed above the storm drain approximately 25 feet southwest of the southwest corner of the building shown on Figure 5.4-2 of the Plan.

16. Figure 5.12-2, page 96:

NMED Comment: As discussed during the August 2008 site visit, LANL staff agreed that the sample locations within the down slope areas on the north side of Cañada del Buey for various SWMUs and AOCs illustrated on the figure are not positioned in well defined drainages. The proposed locations should be spread over appropriate bench areas below the mesa top to define contaminant extent for affected SWMUs and AOCs

The Permittees must address all comments and submit a revised Plan by September 29, 2008. As part of the response letter that accompanies the revised Plan, the Permittees shall include a table that details where all revisions have been made to the Plan and that cross-references NMED's numbered comments. All submittals (including maps) must be in the form of two paper copies and one electronic copy in accordance with Section XI.A of the Order. The Permittees must also submit a redline-strikeout version that includes all changes and edits to the Plan (electronic copy) with the response to this NOD.

Please contact Daniel Comeau at (505) 476-6043, should you have any questions.

Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

Messrs. Gregory and McInroy
August 28, 2008
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