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October 30, 2007

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RE: NOTICE OF DISAPPROVAL FOR THE INVESTIGATION WORK PLAN FOR NORTH ANCHO CANYON AGGREGATE AREA LOS ALAMOS NATIONAL LABORATORY (LANL), EPA ID #NM0890010515 HWB-LANL-07-028

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 LLC's (LANS) (collectively, the Permittees) *Investigation Work Plan for North Ancho Canyon Aggregate Area* (Plan), dated September 2007 and referenced by LA-UR-07-5947/EP2007-0544. NMED has reviewed this document and hereby issues this Notice of Disapproval (NOD).

General Comments

1. Figures 4.7-1, 4.13-1, and 4.15-1 are included on pages 118, 120, and 122, respectively, but they are not included in the Table of Contents. The Permittees must revise the Table of Contents to include all figures referenced in the Plan. Additionally, the Permittees must ensure that all figures referenced in the text correspond to the appropriate figure. For example, Section 4.20, Extended Drainages, states that "sediment samples within the ephemeral stream drainage

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channel will be collected as diagramed in Figure 4.8-1. However, Figure 4.8-1 is entitled *Proposed confirmation sampling locations for SWMU 39-001(b) excavation activities.* The Permittees must revise the text where appropriate.

2. Throughout the Plan (Sections 4.7.2, 4.8.2, 4.13.2, 4.15.2, 4.16.2, 4.18.2, and 4.20.2), the Permittees make a similar statement: "[s]amples with radiation readings more than 2 times background levels will be submitted for alpha and gamma spectroscopy. At a minimum, 30% of field-screened samples will be sent for off-site analysis" (in some cases, mention of field screening for PCBs, metals, and HE is included). However, in all sections where the Permittees make this statement, they also maintain that all samples will be submitted for analysis of the parameters in one of three tables (4.0-1, 4.1-1, or 4.3-1). The Permittees must clarify whether it is their intention to submit a minimum of 30% of field screened samples and those samples showing detections two times above background (based on field screening) for off-site analysis, or whether the intention is to submit all samples (every depth at each location) for off-site analysis of the parameters listed in one or more of the above-referenced tables. If the intent is the former, the Permittees must provide the rationale for selecting samples for submittal to an offsite laboratory for analysis.

3. The Permittees state in several sections throughout the Plan (Sections 4.7, 4.8, 4.13, 4.14, 4.15, 4.16, 4.18, and 4.19) that the nature and extent of contamination outside the SWMU or AOC boundary "will be resolved by the South Canyons Investigation Work Plan and through sampling of the extended drainages in North Ancho Canyon." To determine whether or not the proposed South Canyons investigation sampling is sufficient to capture off-site contaminant migration from SWMUs and AOCs within the aggregate, the Permittees must provide a map of the proposed South Canyons sampling locations that depicts their proximity to the SWMUs and AOCs in the North Ancho Canyon Aggregate Area.

4. At each site undergoing investigation, the Permittees must obtain the most contaminated sample based on field screening and submit it for off-site analysis of dioxins/furans. The Permittees must also add tritium to the list of parameters in Table 4.1-1.

Specific Comments:

1. **Section 2.2.1.4, Conceptual Site Model, page 12, bullet 7:**

   Permittees' Statement: "Evaluation of contaminant transport in erosion and run-off was limited to only four samples, but any contamination from the landfill would be difficult to discern from contamination originating upstream."

   NMED Comments: Thirteen sample locations within the SWMU boundaries are identified in Figures 2.2-2, 2.2-3, and 2.2-4. However, the four samples referenced in the

statement above are not included in the above-referenced figures. The Permittees must revise the Plan so that each figure depicts all previous sampling locations.

2. **Section 4.2, SWMU 39-004(a), Firing Site, page 34:**

   Permittees' Statement: "SWMU 39-004(d) is a firing site and an active RCRA operating unit that is subject to RCRA closure requirements and not Consent Order requirements. SWMU 39-004(d) is not proposed for investigation under this work plan."

   NMED Comment: SWMU 39-004(d) is listed on Table IV-1, Non-Deferred Sites Within Testing Hazard Zones, of the March 1, 2005 Order on Consent (Order). Therefore, the Permittees must revise the Plan to include proposed investigation activities at SWMU 39-004(d).

3. **Section 4.3, AOC 39-002(d), Storage Area, page 34:**

   Permittees' Statement: "AOC 39-002(d) is a former SAA regulated under 40 CFR 262 and 20.4.1 NMAC. As such, it is appropriate for NFA. A statement of basis describing the rationale for NFA and a request for a certificate of completion for this AOC will be submitted with the investigation report associated with this investigation work plan."

   NMED Comment: According to Section 2.2.2 of the Historical Investigation Report (HIR), only two surface samples were collected from within the footprint of the storage area. The Permittees go on to state that the data are only screening level data and is therefore not discussed or reported. Based on the lack of information provided in Section 2.2.2 of the HIR and Section 4.3 of the Plan and that no reliable data exists for this site, the Permittees must revise the Plan to include proposed investigation activities for AOC 39-002(d) or provide sufficient information which suggests that no further investigation is necessary at the site (*e.g.*, period of use, documentation indicating there were no releases, additional sampling data, or final closure reports).

4. **Section 4.8, SWMU 39-001(b), Disposal Trenches, page 35, paragraph 1:**

   Permittees' Statement: "Activities will include waste and soil/fill excavation..."

   NMED Comment: NMED acknowledges that historical investigations included the excavation and sampling of 13 test pits, 12-16 feet below ground surface (bgs). However, the waste and soil/fill excavation activities identified on page 35 do not explicitly state the depth to which the Permittees will excavate. NMED assumes that the Permittees will excavate the landfill material to an estimated depth of 16 feet or, depending on the circumstances, to refusal in native tuff. Confirmatory sampling will then be completed at the excavation limits. The Permittees must provide clarification to confirm or refute NMED's assumption.

5. **Section 4.8.1, Investigation Objectives, paragraph 1 and Section 4.8.2 Confirmation Sampling, paragraph 2, page 36:**

   Permittees' Statement: "Historical data are adequate to establish approximate SWMU boundaries" and "Samples will be collected at the excavated surface at depths of 0-6 inches and 6-12 inches bgs..."

   NMED Comment: NMED agrees that the Permittees have reasonably established the vertical extent of contamination at SWMU 39-001(b) as 16 feet bgs. However, information concerning the lateral extent is unclear. The Permittees shall therefore conduct confirmatory sampling by collecting two samples at 25 foot intervals along the side walls of the excavated pit, in addition to the sampling required at the bottom of the excavation. The sidewall samples must be obtained from two intervals at each location (assuming an excavation depth of approximately 0-16 feet bgs). The Permittees must target the 5-7 foot interval and the 10-15 foot interval as well as areas of visible staining or elevated detection by field-screening. The Permittees must revise the text to reflect this change.

6. **Section 4.8.2, Confirmation Sampling, page 36, paragraph 1:**

   Permittees' Statement: "The total number of confirmation samples will be greater than or equal to 30 samples for the first confirmation sampling event to ensure adequate confidence that potentially contaminated areas are not missed during the excavation."

   NMED Comment: NMED acknowledges the Permittees' attempt to "ensure adequate confidence that potentially contaminated areas are not missed during the excavation." However, the Permittees did not provide a rationale for selecting a minimum of 30 samples. Therefore, the Permittees must collect a minimum of one confirmation sample for every 400 ft^2 from the base of the excavation or provide the rationale for collecting greater than or equal to 30 confirmation samples.

7. **Section 4.9, SWMU 39-008, Firing Site, page 36:**

   Permittees' Statement: "Aboveground, airborne releases of contaminants from the active firing site may continually disperse contamination across the aerial extent of this SWMU. Therefore, due to the ongoing use of the firing site which limits access to conduct a sampling investigation and provides significant health and safety concerns to the investigation team, the investigation at SWMU 39-008 is proposed to be delayed until such time as the operations at the firing site have ceased."

   NMED Comment: SWMU 39-008 is listed on Table IV-1, Non-Deferred Sites Within Testing Hazard Zones, of the Order. Therefore, the Permittees must revise the Plan to include proposed investigation activities at SWMU 39-008.

8. **Section 4.11, SWMU 39-004(c), Firing Site, page 37:**

   Permittees' Statement: SWMU 39-004(c) is an active firing site and active operating RCRA OD site (structure 39-06) subject to RCRA closure requirements and not Consent Order requirements. SWMU 39-004(c) is not proposed for investigation under this work plan."

   NMED Comment: SWMU 39-004(c) is listed on Table IV-1, Non-Deferred Sites Within Testing Hazard Zones, of the Order. Therefore, the Permittees must revise the Plan to include proposed investigation activities at SWMU 39-004(c).

9. **Section 4.12, AOC 39-002(b), Storage Area, page 37:**

   Permittees' Statement: "AOC 39-002(b) will continue to be affected by the ongoing firing activities: potential contaminants from the blasting activities will continue to be dispersed periodically over the aerial extent of this AOC. The active firing site may release contaminants that are similar to those suspected to be present at the AOC. Therefore, investigation of this AOC is proposed to be delayed until operations at the active firing point have ceased."

   NMED Comment: SWMU 39-002(b) is listed on Table IV-1, Non-Deferred Sites Within Testing Hazard Zones, of the Order. Therefore, the Permittees must revise the Plan to include proposed investigation activities at SWMU 39-002(b)

10. **Section 4.14.2, Determine Nature and Extent of Contamination (AOC 39-007(d)), page 38, paragraph 1:**

    Permittees' Statement: "A total of 11 samples will be taken to characterize the nature and extent of contamination at AOC 39-007(d). Eight samples will be taken 2 feet from the edge of the asphalt pad. An additional three samples will be taken downgradient of the storage pad, one at the center of an unpaved road and two on either side of the road in transect."

    NMED Comment: The sampling locations proposed for AOC 39-007(d) are not sufficient to determine the vertical extent of contamination directly beneath the asphalt pad. The Permittees must propose additional sampling locations within the limits of the pad. The Permittees must also target areas of visible staining and cracks in the asphalt. The additional samples must be collected at the same intervals and submitted for the same analytical parameters proposed in Section 4.14.2. The Permittees must revise the text and Figure 4.14-1 to reflect this change.

11. **Section 4.17, AOC 39-002(e), page 40:**

    Permittees' Statement: AOC 39-002(e) is a former SAA regulated under 40 CFR 262 and 20.4.1 NMAC. As such it is appropriate for NFA. A statement of basis describing the

rationale for NFA and a request for a certificate of completion for this AOC will be submitted with the investigation report associated with this investigation work plan."

NMED Comment: The Permittees have not provided evidence that this site has ever been investigated. Therefore, the Permittees must revise the Plan to include proposed investigation activities at SWMU 39-002(e) or provide sufficient information which suggests that no further investigation is necessary at the site (*e.g.*, period of use, sampling data, documentation indicating there were no releases, or final closure reports).

12. Section 4.18, SWMU 39-002(a)) Storage Area, page 40:

Permittees' Statement: "SWMU 39-002(a) Area 1 is proposed for investigation, based upon the historical data-quality assessment. SWMU 39-002(a) Area 2 is not proposed for investigation because it is an indoor storage area with no potential for releases to the environment. SWMU 39-002(a) Area 3 is not proposed for investigation because it is an active RCRA-regulated SAA and holding/receiving area."

NMED Comment: The Order requires the Permittees to investigate the entire North Ancho Canyon Aggregate Area. SWMU 39-002(a) is included in the North Ancho Canyon Aggregate Area; therefore the Permittees are required to investigate the entire SWMU, not just a portion of the SWMU. Furthermore, there is no provision in the Order which allows for partial investigation of a SWMU. The Permittees must revise the Plan to include proposed investigation activities in Areas 2 and 3 at SWMU 39-002(a).

13. Section 4.19, SWMU 39-006(a), Septic System, Inactive Components, page 41, paragraph 1:

Permittees' Statement: "SWMU 39-006(a) inactive components are proposed for removal and sampling under this work plan, as discussed previously. No preliminary characterization is required based on evaluation of historical investigation results."

NMED Comment: See specific comment # 12. The Permittees must revise the Plan to include proposed investigation activities for the active components of SWMU 39-006(a).

14. Section 4.19.2, Confirmation Samples (SWMU 39-006(a)), pages 41-42:

Permittees' Statement: "The actual location of the confirmation samples will be subject to change, and the final sample locations will be identified in the investigation report."

NMED Comment: The Permittees must elaborate on the circumstances, such as unforeseen field conditions, that would change the proposed sampling locations.

15. Section 4.19.2, Confirmation Samples (SWMU 39-006(a)), page 42, paragraph 2:

Permittees' Statement: "Samples will be collected at the excavated surface at a depth of 0-6 in. and 6-12 in. bgs with scoops and shovels."

NMED Comment: The text states that confirmatory samples will be collected at two depths (0-6 in. and 6-12 in.) at each location. However, Table 4.0-1 shows that samples will be collected at three depths, 0-1 foot, 1-2 feet, and 2-3 feet. The Permittees must clarify at what depths confirmatory samples will be collected at SWMU 39-006(a) as well as revise either the text or Table 4.0-1, whichever is appropriate.

The Permittees must address all comments and submit a revised Plan by December 1, 2007. 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. In addition, the Permittees shall submit a redline-strikeout version that includes all changes and edits to the Plan (electronic copy) with the response to this NOD.

Please contact Kathryn Roberts at (505) 476-6041 should you have any questions.

Sincerely,

James P. Bearzi
Chief
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cc:

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