



SUSANA MARTINEZ  
Governor

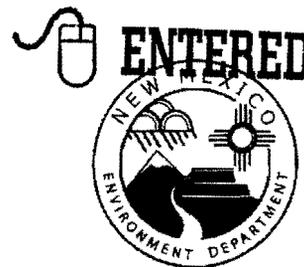
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TA39

**NEW MEXICO  
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DAVE MARTIN  
Secretary

RAJ SOLOMON, P.E.  
Deputy Secretary

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

March 4, 2011

George J. Rael, Assistant Manager  
Environmental Projects Office  
U.S. Department of Energy/National  
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Michael J. Graham  
Associate Director Environmental Programs  
Los Alamos National Security, L.L.C.  
P.O. Box 1663, MS M991  
Los Alamos, NM 87545

**RE: NOTICE OF DISAPPROVAL  
PHASE II INVESTIGATION WORK PLAN  
FOR NORTH ANCHO CANYON AGGREGATE AREA  
LOS ALAMOS NATIONAL LABORATORY  
EPA ID #NM0890010515  
HWB-LANL-10-104**

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) *Phase II Investigation Work Plan for North Ancho Canyon Aggregate Area (Work Plan)*, dated December 2010 and referenced by LA-UR-10-7869/EP2010-0510. NMED has reviewed the Work Plan and, pursuant to Section III.M.2 of the March 1, 2005 Order on Consent (Consent Order), hereby issues this Notice of Disapproval (NOD).

34401



### **Part I – Multi Incremental Sampling**

The Permittees have already conducted and are proposing additional Multi Incremental (MI) sampling to characterize PCB contamination associated with two capacitor staging areas and other areas used for stockpiling and handling waste and contaminated soils at SWMUs 39-001(a) and 39-001(b). MI sampling was also used for confirmation samples to verify removal of PCB-contaminated soils. The use of the MI sampling approach was not included in the approved *Investigation Work Plan for North Ancho Canyon Aggregate Area, Revision 1* (Work Plan), dated December 2007 or the *Investigation Report for North Ancho Canyon Aggregate Area, Revision 1* (IR Report), dated January 2010. NMED was never notified that MI sampling would be used for characterization and confirmation sample collection. Using methods not specified in the Consent Order or in approved work plans is in contravention of the Consent Order. Even if NMED has approved MI sampling, it was not correctly applied or conducted. NMED would not have approved MI sampling at this site in any case because it is inappropriate for this application. MI sampling may be acceptable as a screening tool in some situations, but not for compliance sampling to verify cleanup. MI sampling is intended for use for the “collection and processing of samples for characterization of secondary explosive and propellant residues [which are] heterogeneously distributed as particulates of various sizes, shapes, and compositions over large areas at firing point, around targets, and around individual detonation events” (EPA Method 8330B, Appendix A).

Additionally, MI sampling is only appropriate for surface sampling and can not define the lateral extent of the contamination when applied to a soil removal action. In fact, the method requires the sampler to avoid areas that could dilute the sample and collect a minimum of 30 subsamples, precluding the possibility of defining a contaminated area.

Nevertheless, if possible and technically defensible, NMED seeks to salvage some or all of the data collected in this unapproved manner. The Work Plan must therefore be revised to clarify how MI sampling was conducted and to address the following comments specific to MI sampling.

1. Even if NMED had approved MI sampling, it was not conducted in accordance with the sampling protocol for EPA Method 8330B, Appendix A or the State of Alaska Department of Environmental Conservation guidance document (DEC Guidance) (Guidance Documents) that the Permittees reference. The Work Plan describes a modified MI sampling method by collecting and submitting composite samples to the laboratory. Page 17 of the Work Plan states “[w]ithin each decision unit, 50 increments were collected by stainless-steel scoop throughout the entire footprint of the decision unit and combined in a stainless-steel bowl into a single sample.” The Permittees do not explain if the entire sample from the stainless-steel bowl was submitted to the laboratory or if only a portion of the sample was submitted for analysis.

Provide more information regarding the sampling method used to collect and homogenize confirmation samples as discussed in Section 2.9.1.2 (Soil Sampling). Clarify if homogenization of the confirmation samples was conducted in accordance with EPA Method

8330B. If the Permittees did not conduct homogenization in the field per the EPA Method 8330B, verify that it was conducted by the analytical laboratory.

2. Clarify if confirmation sampling was completed as composite sampling in contravention of the methods. If the MI sampling method was modified, revise the Work Plan to explain how and why this method was modified. In addition, explain if a form of grid sampling was used to collect confirmation samples, and if and how they were composited into one sample for each decision unit and sent to the laboratory for analysis.
3. Explain how the samples were processed (e.g., by grinding and passage through a #10 (2mm) sieve) prior to being sent to the laboratory, at the laboratory, or both, prior to analysis.
4. The Permittees state, "QA/QC samples will include field duplicate, equipment rinsate, and field trip blank samples. Field duplicate and rinsate blank samples will be collected at an overall frequency of at least 1 for every 10 regular samples as directed by the current version of SOP-5059, Field Quality Control Samples." The aforementioned Guidance Documents discuss the importance of taking a triplicate sample. Clarify if this QA/QC was used for the MI sampling already conducted, and if so, explain why a triplicate sample was not collected for the MI sampling conducted at SWMU 39-001(a) and 39-001(b).

## **Part II – Specific Comments:**

### **5. Section 1.3 (Cleanup Levels), page 2:**

**Permittees' Statement:** "[a]s specified in section VIII.B.1 of the Consent Order, NMED soil screening levels (SSLs) (NMED 2009, 108070) or Laboratory screening action levels (SALs) (LANL 2009, 107655) will be used as soil cleanup levels unless they are determined to be impractical or unless values do not exist for the current and reasonably foreseeable future land use scenarios."

**NMED Comment:** Clarify that "laboratory screening action levels" are referencing the radionuclide screening action levels. This clarification must be applied to this and all future documents, as applicable.

### **6. Section 2.2.3 (Delayed Site Investigation Rationale, SWMU 39-002(a), Area 1), page 5:**

The Permittees propose to delay the investigation at SWMU 39-002(a), Area 1. The Investigation Report must state that site characterization and remediation at SWMU 39-002(a), Area 1 will be delayed until the operations have ceased and D&D of the new pad and adjacent buildings 39-2 and 39-62 have been completed.

**7. Section 2.4.2 (Nature and Extent of Contamination), page 6 and 2.4.3 (Proposed Activities at SWMU 39-006(a)), page 7:**

**Permittees' Statement:** Section 2.4.2, Former Septic Tank, bullet 2: "[l]ateral extent of tritium is not defined at sample locations 39-604874 and 39-604877." Section 2.4.3: "[s]amples will also be collected at three new locations (6a-1, 6a-2, and 6a-3) to define the lateral extent of tritium around the former septic tank location. Sample locations will be 2.0 ft outside of the 2009 septic tank excavation area to the west, east, and south. Samples will be collected at depths of 9.0 to 10.0 ft and 15.0 to 16.0 ft bgs and analyzed for tritium."

**NMED Comment:** Section 2.4.3 must be revised to include additional sampling for tritium at sample location 39-604874 to define the lateral extent as indicated in Section 2.4.2. Revise Section 2.4.3 accordingly.

**8. Section 2.4.3 (Proposed Activities at SWMU 39-006(a)):**

The Work Plan does not discuss the depths of the former chemical seepage pit, former septic tank, or former sand filter. Ensure all sampling has been and will be conducted below the base of these former units. Revise the Work Plan to include the depths of the base of these former units and confirm that sampling has been, or will be, conducted below the base of the units.

**9. Section 2.5.3 (Proposed Activities at SWMU 39-007(a)), page 8:**

**Permittees' Statement:** "[t]he upper 2.0 ft of soil will be removed within a 4-ft radius around sample locations 39-10019 and 39-604854 where Aroclor 1254 and Aroclor 1260 concentrations were detected above 1.0 mg/kg. Confirmation samples will be collected at six new locations (7a-1 to 7a-6) on the sidewalls around the excavation to confirm cleanup to less than 1.0 mg/kg PCBs. Sidewall samples will be collected at depths of 0.0 to 1.0 ft, 2.0 to 3.0 ft, and 4.0 to 5.0 ft bgs."

**NMED Comment:** It is not clear how the sidewall samples will be collected from depths of 4.0 to 5.0 feet if soil will only be removed to depths of two feet below ground surface (bgs). Revise the Work Plan to clarify how the sidewall samples will be collected from 4.0 to 5.0 feet, and that all samples will be collected as discrete samples.

**10. Section 2.5.3 (Proposed Activities at SWMU 39-007(a)), page 8:**

**Permittees' Statement:** "[t]he upper 2.0 ft of soil will be removed within a 4-ft radius around sample locations 39-10019 and 39-604854 where Aroclor 1254 and Aroclor 1260 concentrations were detected above 1.0 mg/kg."

**NMED Comment:** Revise the Work Plan to describe the proposed method for removing the upper two feet within the four foot radius (e.g., shovel). Also discuss proposed management, testing, and disposal or remediation waste.

**11. Section 2.6.3 (Proposed Activities at SWMU 39-010), bullet 1, page 10:**

**Permittees' Statement:** “[s]amples collected from location 39-604437 will be analyzed for bis(2 ethylhexyl)phthalate, di-n-butylphthalate, and isotopic uranium.”

**NMED Comment:** Confirm that sample location 39-604437 will be analyzed for isotopic uranium as indicated above (Section 2.6.2 (Nature and Extent of Contamination), bullet four does not list isotopic uranium to be analyzed at this sample location). Revise all related sections, figures, and tables of the Work Plan to clarify that isotopic uranium will be analyzed at sample location 39-604437. See also Comment 12.

**12. Table 2.6-5 (Summary of Proposed Sampling at SWMU 39-010), page 105:**

**NMED Comment:**

- a. Sample location 39-604428 proposes analysis of isotopic uranium. However, according to Section 2.6.3 (Proposed Activities at SWMU 39-010), sample 39-604428 proposes analysis for tritium, not isotopic uranium. Further, the analysis for tritium is not listed in table 2.6.5. Table 2.6.5 must be revised to list the correct analysis, including tritium, for sample location 39-604428.
- b. Column 2 (Sampling Extent Objective) states “[d]efine vertical extent of contamination for copper, lead, mercury, benzo(a)pyrene, bis(2-ethylhexyl)phthalate, di-n-butylphthalate, HMX, uranium-234, uranium-235/236, and uranium-238.” The table must also include tritium.
- c. Clarify that samples obtained at location 39-604437 are proposed to be analyzed for isotopic uranium (See also Comment 11).

**13. Section 2.9.1 (waste Characterization and Soil Sampling Results), page 11:**

**Permittees' Statement:** “[w]aste characterization sampling was performed to collect data needed for characterization of the contaminated soil being transported from the sites as waste. Soil sampling was performed after removal of waste to characterize residual contamination associated with waste management activities. These sampling activities and associated results are described below, and the data are provided in Appendix D (on CD included with this document).”

**NMED Comment:** Revise the text to include the following information:

- a. The total volume of soil removed from the site (waste characterization area) for disposal.
- b. Definition of the entire area where waste characterization was conducted (i.e., identify the number of waste piles and their approximate volumes and

footprints).

- c. The location of where the soil was disposed and the method of shipment.
- d. The document that described the waste characterization activities for the contamination soils at SWMUs 39-001(a) and 39-001(b) (reference NMED's approval document).

**14. Section 2.9.1.1 (Waste Characterization Sampling), page 11:**

**Permittees' Statement:** "[t]he soil and debris removed from SWMUs 39-001(a) and 39-001(b) were stockpiled within the area of contamination at each site. As part of waste characterization activities, soil samples were collected from the waste pile at each site. Thirty-four samples were collected from the waste pile at SWMU 39-001(a), and ninety-two samples were collected from the waste pile at SWMU 39-001(b)."

**NMED Comment:** Revise the Work Plan to address the following items:

- a. The above paragraph uses the terms stockpile and waste pile. Clarify if these terms are synonymous or reference different media. Revise the Work Plan to use only one term or define both terms, if referencing different media.
- b. Include the dimensions and total volume(s) of soil within each stock/waste pile associated with SWMU 39-001(a) and SWMU 39-001(b).
- c. Explain how the number of samples collected from each waste pile was determined.
- d. Explain the sample collection method(s), (e.g., discrete or composite samples collected, if composite, were the samples put in a stainless steel bowl or directly into a sample container, samples were collected using a shovel).
- e. What criteria were used to determine which samples would be analyzed from the waste piles (e.g., samples with the highest screening levels, samples containing visual evidence of contamination).

**15. Section 2.9.1.1 (Waste Characterization Sampling), pages 11-12:**

**Permittees' Statement:** "[a]ll samples from the SWMU 39-001(a) waste pile were submitted for laboratory analysis of americium-241, cyanide (total), explosive compounds, gamma-emitting radionuclides, herbicides (total and toxicity characteristic leaching procedure [TCLP]), isotopic plutonium, isotopic uranium, metals (TAL and TCLP), nitrate, PCBs, perchlorate, pesticides (total and TCLP), strontium-90, SVOCs (total and TCLP), total petroleum

hydrocarbons – gasoline range organics (TPH-GRO), tritium, and VOCs (total and TCLP). All samples from the SWMU 39-001(b) waste pile were submitted for laboratory analysis of americium-241, cyanide (total), gamma-emitting radionuclides, herbicides (total), isotopic plutonium, isotopic uranium, metals (TAL and TCLP), nitrate, perchlorate, strontium-90, and tritium, and all samples but one were analyzed for explosive compounds, herbicides (TCLP), PCBs, pesticides (total and TCLP), SVOCs (total and TCLP), and VOCs (total and TCLP). Ten samples were also submitted for laboratory analysis of total petroleum hydrocarbons – diesel range organics (TPH-DRO), and seventy-six samples were submitted for laboratory analysis of TPH-GRO. The samples collected and analyses requested are summarized in Tables 2.9-1 and 2.9-2 for SWMUs 39-001(a) and 39 001(b), respectively.”

**NMED Comment:** Revise the Work Plan to address the items below.

- a. Waste pile samples from 39-001(a) were analyzed for gasoline range organics (GRO); explain why these samples were not also analyzed for diesel range organics (DRO).
- b. In reference to the analyses conducted from the SWMU 39-001(b), explain why specific analyses for some samples were omitted (e.g., ten samples include DRO analysis and 76 analyzed for GRO, why all samples were not analyzed for both DRO and GRO).

**16. Section 2.9.1.2 (Soil Sampling), paragraphs 1- 2, pages 12:**

**Permittees’ Statement:** “[s]oil sampling was directed toward characterizing contamination associated with two capacitor staging areas and contamination associated with the areas used for stockpiling and handling waste and contaminated soil at SWMUs 39-001(a) and 39-001(b). These sampling activities are described below. Two areas located along the eastern boundary of SWMU 39-001(a), within the designated area of contamination, were used to stage electrical capacitors removed from the SWMU 39-001(a) landfill (Figure 2.9-1).”

**NMED Comment:** Revise the Work Plan to describe the dimensions of the two capacitor staging areas and stockpile areas, and identify the volume of soil removed from these areas. Clarify whether the sampling described above was conducted after all of the contaminated media was removed from the capacitor staging areas and the stockpile areas. Confirm that the “designated area of contamination” is the same as the area of contamination as described in Section 2.9 of the Work Plan. In the Response Letter, identify the document or correspondence that describes the soil sampling methods and procedures used to characterize contamination and sampling methods as described in this Section, and reference NMED’s approval letter.

**17. Section 2.9.1.2 (Soil Sampling), paragraph 2, page 12:**

**Permittees’ Comment:** “[f]ollowing removal of the capacitors, surface samples (0.0 ft to 0.17 ft bgs) were collected from the staging areas. Each staging area was divided into 5-ft × 5-ft decision units, and multi-increment (MI) samples were collected from seven decision units in the

northern area and from nine decision units in the southern area and submitted for laboratory analysis of PCBs, (the technical approach for MI sampling is described in section 3.4.1.1). Two ft of soil was excavated from seven decision units in the northern staging area and from nine decision units in the southern staging area where PCBs were detected above 1.0 mg/kg or soil staining was noted because of leakage from the capacitors. Following excavation, the Laboratory collected confirmation samples within the boundaries of the two capacitor staging areas. MI samples were collected from a depth of 2.0 ft to 2.17 ft bgs from each of the seven excavated decision units in the northern staging area. In addition, discrete confirmation samples were collected at depths of 2.0 ft to 2.17 ft bgs at two locations in the excavation sidewall from the northern staging area and three locations in the excavation sidewall from the southern staging area. All samples were submitted for laboratory analysis of PCBs.”

**NMED Comment:** Revise the Work Plan to address the following items:

- a. Include the dimensions of the entire area excavated.
- b. Identify the number of MI samples collected within each decision unit.
- c. Describe how the MI samples were collected (e.g., tool used to collect the samples, were samples collected as discrete or composite, if composite samples describe how the samples were composited (put in stainless steel bowl, put directly into sample container). See also Part I Comments.
- d. Describe how the discrete confirmation samples were collected from the excavation side walls and explain if the discrete confirmation samples collected from the excavation sidewalls were collected from within decision units.
- e. Explain how the sidewall sample locations were determined.
- f. Explain why PCBs were the only constituent analyzed. Section 2.9.1.1 indentifies the analysis for various constituents located at 39-001(a) and 39-002(b).
- g. Explain why MI sampling was used. See also Part I Comments.
- h. Clarify if the entire footprint of the capacitor staging areas and stockpile areas were sampled or just portions of these areas (e.g., did decision units cover the entire footprint of the staging area or a portion of the staging areas). Provide all dimensions as necessary.

**18. Section 2.9.1.2 (Soil Sampling), paragraph 1, page13:**

**Permittees' Statement:** “[b]ased on the results of this sampling, an additional 2.0 ft of soil was removed from one decision unit in the northern area and from two decision units in the southern

area where PCBs were detected above 1.0 mg/kg. Following excavation, MI samples were collected from a depth of 4.0 ft to 4.17 ft bgs from each of the three decision units and submitted for laboratory analysis of PCBs. The results from these samples showed PCB concentrations of less than 1.0 mg/kg at all locations, and the excavated areas were backfilled with clean soil.”

**NMED Comment:**

- a. Identify the volume of excavated soil and where it was disposed.
- b. The northern area contained nine decision units and the southern area contained seven decisions units. Identify which decision units required soil removal.
- c. Explain how the MI samples collected from 4.0 to 4.17 feet were collected (e.g., shovel, composite or discrete sample).
- d. The samples from 4.0 to 4.17 feet were only analyzed for PCBs. Explain why no additional chemical analyses were necessary.
- e. Explain how it was determined that the excavated area could be backfilled with clean soil when the only analysis conducted was for PCBs.
- f. MI sampling, as modified by the Permittees, does not address “hot spots.” Explain how it was determined that no hot spots existed within the decision units.

**19. Section 2.9.1.2 (Soil Sampling), paragraph 2, page 13:**

**Permittees’ Statement:** “[f]ollowing completion of packaging and transportation of wastes from the site, the Laboratory collected confirmation samples from the areas where contaminated soil had been stockpiled and handled. The objective of this confirmation sampling was to characterize residual PCB contamination remaining on the surface after completion of waste management activities to determine whether additional cleanup was required. This confirmation sampling is unrelated to the sampling performed during the 2009 investigation to characterize the nature and extent of contamination at the associated SWMUs, and the results of the confirmation sampling do not affect the conclusions of the 2009 investigation.”

**NMED Comment:** Clarify if this paragraph is summarizing the previous paragraphs in this Section (describing soil removal, confirmation, and MI sampling) or whether additional confirmation samples were collected. If additional confirmation samples were collected as described above, describe where and how the confirmation samples were collected. In addition, explain why PCB contamination was characterized and no other constituents were considered.

**20. Section 2.9.1.2 (Soil Sampling), paragraph 2, page 13:**

**Permittees' Statement:** "[t]he confirmation sampling approach for the former soil stockpiles and waste-handling areas at SWMUs 39-001(a) and 39-001(b) was based on the MI sampling approach discussed in section 3.4.1.1. The MI sampling approach was followed for the collection of confirmation samples, with the former soil stockpiles and surrounding areas divided into 25-ft × 25-ft decision units; decision-unit boundaries and dimensions were determined before MI confirmation sampling. Each decision unit within the areas where waste or spoils had been stockpiled or handled was sampled. Figures 2.9-2 and 2.9-3 show the decision units sampled at each site, respectively."

**NMED Comment:** Revise the Work Plan to address the items below.

- a. Define the "waste handling areas," including the dimensions, and explain if these areas are the same as the "capacitor staging areas." Use consistent terminology.
- b. This paragraph discusses decision units as being 25 ft x 25 ft; however, page 12 discusses decision units being 5 ft x 5 ft. Clarify which decision units are associated with each staging unit or waste pile (e.g., 5 ft x 5 ft decision units are associated with the capacitor staging piles, 25 x 25 decision units are associated with soil stockpiles).
- c. Explain how MI sampling was used to determine that cleanup is complete at these sites. See also Part I Comments.

**21. Section 2.9.1.2 (Soil Sampling), paragraph 4, page 13:**

**Permittees' Statement:** "[b]ased on the frequency of detection of contaminants above residential SSLs and SALs in the waste characterization sampling, and the magnitude of sample results above SSLs and SALs, PCBs were determined to be the best indicator of residual contamination. Therefore, all MI samples were submitted for laboratory analysis of PCBs."

**NMED Comment:** Revise the Work Plan to demonstrate why other residual constituents of the waste piles and stock piles are not as good or better indicators of the presence of contamination.

**22. Section 2.9.1.2 (Soil Sampling), paragraph 5, page 13:**

**Permittees' Statement:** "[r]esults of the MI sampling are presented in Table 2.9-12 and Figure 2.9-4 for SWMU 39-001(a) and in Table 2.9-13 and Figure 2.9-5 for SWMU 39-001(b). Thirty nine of the 46 decision units at SWMU 39-001(a) and 4 of the 80 decision units at SWMU 39 001(b) had PCBs greater than 1.0 mg/kg."

**NMED Comment:** Page 12 discusses the creation of 16 decision units. Revise the Work Plan to clearly, accurately, and consistently describe the number of decision units created for each SWMU, their dimensions, whether all decision units were sampled, indicate if they covered the entire footprint of the contaminated media staging areas.

**23. Section 2.9.1.2 (Soil Sampling), pages 12-13:**

**NMED Comment:** This Section is missing pertinent details (e.g., dimensions of staging piles, sample collection methods, and if the entire staging areas were sampled) to make an evaluation of whether residual contamination is present at the areas of contamination. Revise the Work Plan as follows:

- a. Clearly define the areas of contamination (e.g., provide the dimensions and locations).
- b. MI sampling was inappropriately applied. Propose and describe grid sampling (e.g., grid spacing, discrete sample collection) for the entire areas of contamination, include the capacitor staging areas and the soil stockpile areas. See also Part 1.
- c. Propose the chemical analytical suite for each discrete sample.
- d. Describe the sample collection methods.
- e. Describe the waste sampling activities already completed in accordance with the comments associated with Section 2.91, 2.9.1.1, and 2.9.1.2. Identify the areas that have been excavated and how much soil has been removed from the staging and stockpile areas.

**24. Section 2.9.2 (Proposed Activities), page 14:**

MI sampling as described in this Section will not be effective to define the area to be excavated. Explain how excavation will be conducted, identify how excavated soils will be managed and disposed and propose confirmation sample collection (samples must be discrete) using a grid sampling method. All sampling methods and procedures must be described in detail. Propose chemical analysis of the discrete samples as well. Additional sampling may be required at the capacitor staging areas and stockpile areas.

**25. Section 3.6 (Quality Assurance/Quality Control Samples), page 18:**

**Permittees' Statement:** "QA/QC samples will include field duplicate, equipment rinsate, and field trip blank samples. Field duplicate and rinsate blank samples will be collected at an overall frequency of at least 1 for every 10 regular samples as directed by the current version of SOP-5059, Field Quality Control Samples."

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March 4, 2011

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**NMED Comment:** The activities associated with SOP-5059 must be included in the revised Work Plan in accordance Consent Order Section IX.A.

**26. Section 3.12 (Well and Angled Borehole Abandonment), page 19:**

**Permittees' Statement:** “[w]ells and boreholes specified in sections 2.7 and 2.8 will be abandoned in accordance with SOP-5034, Monitoring Well and RFI Borehole Abandonment, and will be consistent with Sections IV.B.1.b.v and X.D of the Consent Order.”

**NMED Comment:** Describe the proposed activities associated with SOP-5034 in accordance Section IX.A of the Consent Order. In addition, Section IV.B.1.b.v of the Consent Order refers to the Los Alamos/Pueblo Canyon Investigation Report; explain this reference as the Work Plan is not associated with Pueblo Canyon.

**27. Section 3.13.1 (Removal of Contaminated Soil, Rock, and Sediment), page 20:**

Prior to backfilling any area, the Permittee must have NMED approval.

**28. Section 3.13.4 (Confirmation Sampling), page 21:**

**Permittees' Statement:** “[c]onfirmation sampling will be performed at all remediated sites as described in section 2 of this work plan.”

**NMED Comment:** Details of how confirmation samples will be collected were not provided in Section 2 of the Work Plan. Revise this section to describe how confirmation samples are proposed to be collected (e.g., discrete samples from native media).

**29. Section 5.0 (Schedule), page 22:**

**Permittees' Statement:** “[p]reparation for investigation activities is anticipated to begin in October 2012. Fieldwork is expected to begin in November 2012 and be completed in May 2012. A submittal date of no later than September 30, 2012, is proposed for the Phase II investigation report.”

**NMED Comment:** The schedule appears to be in error. The schedule will need to be adjusted based on the revisions to the Work Plan.

**30. Appendix B, B-2.1 (Drill Cuttings), page B-2:**

**Permittees' Statement:** “[c]uttings will be land applied if they meet the criteria in the NMED approved Notice of Intent Decision Tree for Land Application of Investigation Derived Waste Solids from Construction of Wells and Boreholes.”

**NMED Comment:** The cuttings can only be land applied if the Permittees can demonstrate that all media does not contain any hazardous waste or hazardous constituents at concentrations greater than the New Mexico residential soil screening levels. The Permittees must also adhere to the requirements found in Section IX.B.2.b.iv of the Consent Order. Revise the Work Plan accordingly.

**31. Appendix B, B-2.2 (Excavated Environmental Media), page B-2**

**Permittees' Statement:** “[a] minimum of one sample will be collected for every 100 yd<sup>3</sup> of excavated material.”

**NMED Comment:** Propose to collect a minimum of two samples from the total volume of excavated material. If the total volume is less than 200 yd<sup>3</sup>, one sample must be collected for every 50 yd<sup>3</sup>. Revise the Work Plan accordingly.

**32. Appendix B, B-2.2.2 (Soil Removed from Former Stockpiles and Waste-Handling Areas at SWMUs 39-001(a) and 39-001(b)):**

**NMED Comment:** This section may require changes based on revisions to the Work Plan.

**33. Appendix B, B-2.4 (Purge Water from Wells and Boreholes at SWMUs 39-001(a) and 39-001(b)):**

**Permittees' Statement:** “[a]ny generated purge water will be analyzed for VOCs, SVOCs, radionuclides (as identified for each site in the work plan), total metals, and, if needed, TCLP metals and other analytes required by the receiving facility (e.g., total suspended solids, Microtox, chemical oxygen demand, oil and grease, pH, nitrates). The Laboratory expects any generated purge water to be nonhazardous liquid waste or PCB liquid waste that will be sent to one of the Laboratory’s wastewater treatment facilities or to an authorized off-site facility where the WAC allows the waste to be received.”

**NMED Comment:** The purge water generated from the wells and boreholes must be analyzed for total metals, PCBs, dioxins and furans, and explosive compounds. Revise the Work Plan appropriately.

Messrs. Rael and Graham

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The Permittees must address all comments in this NOD and submit a revised Work Plan on or before **March 28, 2011**. As part of the response letter that accompanies the revised Work Plan, the Permittees must include a table that details where all revisions have been made to the revised Work 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 must submit a redline-strikeout version that includes all changes and edits to the Plan (electronic copy) with the response to this NOD.

Please contact Hope Petrie of my staff at (505) 476-6045 if you have any questions.

Sincerely,



James P. Bearzi  
Chief  
Hazardous Waste Bureau

cc: R. Solomon, Acting Director, NMED WWMD  
J. Kieling, NMED HWB  
D. Cobrain, NMED HWB  
N. Dhawan, NMED HWB  
H. Petrie, NMED HWB  
S. Yanicak, NMED DOE OB, MS J993  
T. Skibitski, NMED DOE OB  
L. King, EPA 6PD-N  
T. Haagenstad, LANS, EP-CAP, MS M992  
S. Schulman, DOE-LASO, MS A316

File: 2011 LANL, Phase II Investigation Work Plan for North Ancho Canyon Aggregate Area  
(dated December 2010)