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 **ENTERED**



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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

June 2, 2011

George J. Rael
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U.S. Department of Energy/National
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Michael Graham
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Los Alamos, New Mexico 87545

**RE: APPROVAL WITH MODIFICATIONS
SUPPLEMENTAL INTERIM MEASURE REPORT
SOLID WASTE MANAGEMENT UNIT 01-001(f), REVISION 1
LOS ALAMOS NATIONAL LABORATORY
EPA ID# NM0890010515
LANL-HWB-10-031**

Dear Messrs. Rael and Graham:

The New Mexico Environment Department (NMED) is in receipt of the Los Alamos National Security, L.L.C. and U.S. Department of Energy (collectively, the "Permittees") document entitled *Supplemental Interim Measure Report for Solid Waste Management Unit 01-001(f) Revision 1* (Report) dated April 2011 and referenced by LA-UR-11-2486/EP2011-0142. The revised Report was submitted in response to NMED's Notice of Disapproval (NOD) dated March 4, 2011. The Report summarizes the continuation of interim measure activities to reduce the amount of PCB-contaminated media and control contaminant migration. NMED has reviewed the Report and hereby issues this Approval with Modifications (Approval) with the following comments.

34550



Comment 1 – MI Sampling, Response 1

The Permittees' response to NMED's March 4, 2011 NOD, Comment 1 states, "NMED did not require the Laboratory to submit a work plan before source removal and did not specify a method for confirmation sampling. During a site visit at SWMU 01-001(f) on December 2, 2009, NMED personnel suggested the Laboratory use multi-increment (MI) sampling for confirmation at SWMU 01-001(f)." NMED's administrative record does not include a proposal from the Permittees to use the MI sampling or contain a written approval by NMED that MI sampling is acceptable for use for confirmation sampling at SWMU 01-001(f). The use of the MI sampling approach was not an appropriate method to confirm the removal of PCB contaminated materials. Regardless, the Permittees did not correctly apply the MI sampling method. The Permittees must resample the areas where MI sampling was used as part of the approved Phase II Investigation for Upper Los Alamos Canyon Aggregate Area. The Permittees must determine the vertical and lateral extent of the PCB contamination at SWMU 01-001(f) at the top of the drainage, within the drainage, and below LA-SMA-2 as necessary and collect samples to confirm the removal of all soil and tuff containing contaminant concentrations greater than the applicable screening levels.

Comment 2 – MI Sampling, Response 2

The Permittees' response to NMED's March 4, 2011 NOD, Comment 2a states, "[n]either the supplemental interim measures (IM) report nor the State of Alaska Department of Environmental Conservation (DEC) Draft Guidance on MULTI INCREMENTAL Soil Sampling cite U.S. Environmental Protection Agency (EPA) Method 8330B, Appendix A." EPA Method 8330B, Appendix A has been reviewed by NMED and is an approved method for sampling in certain circumstances. The ADEC Draft Guidance document has neither been reviewed, nor approved by NMED.

Comment 3 – MI Sampling, Response 3e

The Permittees' response to NMED's March 4, 2011 NOD, Comment 3e states, "[t]he Laboratory did not use the MI sampling guidance documents to perform the 95% upper confidence limit (UCL) calculations. The EPA program ProUCL was used to calculate the 95% UCLs for SWMU 01-001(f) before and after cleanup activities...[t]his calculation was performed using the characterization data presented in the investigation report for Upper Los Alamos Canyon Aggregate Area to represent the 'before' value and the confirmation data presented in Table 5.1-1 of the supplemental IM report to represent the 'after' value."

- a. The data packages containing analytical results for the confirmation samples are provided as Appendix D of the Report. It appears that analytical results for many samples containing significant concentrations of Aroclor-1254 and Aroclor-1260, were not included in Table 5.1-1 (PCBs Detected in Confirmation Samples from SWMU 01-001(f) Outfall and Drainage) and Plate 1 (PCBs detected in confirmation samples following interim removal activities implemented in 2009 and 2010 within the SWMU 01-001(f)

outfall and drainage) for consideration in this report. The samples may have been omitted based on sampling depth and exposure intervals. A total of 150 samples were collected and sent to the laboratories for PCB analysis, 117 samples were selected for calculating the UCLs and from those 117 samples, 115 samples were used to calculate the UCL for Aroclor-1254 and 116 samples were used to calculate the UCL for Aroclor-1260. Explain the rationale used to determine which samples would be used to calculate the UCLs. Also, 111 samples (including seven without reported results) are depicted on Plate 1. Explain the criteria used to select the samples depicted on Plate 1.

- b. Section 5.1 of the report provides a “before” value for the UCL calculation, which is based on characterization data collected before the removal action; and an ‘after’ value for the UCL which is based on confirmation data collected after the removal action. The response to comment 3(e) states that the ‘after’ UCL is calculated based on data provided in Table 5.1-1. The ‘before’ value was calculated using characterization data from the *Investigation Report for Upper Los Alamos Canyon, Revision 1 (IR)*. In the response letter, indicate if the UCL was reported in the IR or if the data was used for calculation only and not reported in the IR.
- c. It appears that there are inconsistencies with the data that were included in the UCL calculations based on the ProUCL output spreadsheets provided.
 1. For Aroclor-1254, the ProUCL output spreadsheet indicates that 115 records were utilized to calculate the UCL, and 12 of those records were non-detects. This is inconsistent with the data provided in Table 5.1-1, which indicates that there are 105 records, all of which are positive detections (i.e., no non-detect values). The analytical data spreadsheet provided in Appendix D indicates 117 records and all of the data report detections of Aroclor-1254. Explain this discrepancy in the response letter.
 2. For Aroclor-1260, the ProUCL output spreadsheet indicates that 116 records were utilized to calculate the UCL, and that 52 of those records were non-detects. This is inconsistent with the data provided in Table 5.1-1, which indicates that there are 105 records where 40 were non-detects. The analytical data spreadsheet provided in Appendix D indicates 117 records and all of the data report detections of Aroclor-1260. Explain this discrepancy in the response letter.

Based on these inconsistencies, and without the provision of the ProUCL input files, it is not clear which data were utilized to calculate the “after” UCLs provided in Attachment 1. The ProUCL output files in Attachment 1 indicate that the data used to calculate UCLs are inconsistent with data provided in Table 5.1-1. Based on the data in Table 5.1-1, UCLs are likely to be significantly lower than the “before” values. However, a risk assessment is not appropriate or warranted at this time because all hazardous constituents have not been analyzed at the site. The Permittees must conduct a complete risk assessment after the Phase II

investigation has been completed for the Upper Los Alamos Canyon Aggregate Area. The risk assessment must include all constituents of concern present at the site.

Comment 4 – MI Sampling, Response 3e

The Permittees' response to NMED's March 4, 2011 NOD, Comment 3e states, "[t]he IM is not intended to be a final remedy, and risk-screening results and recommendations will be presented in the Phase II investigation report for Upper Los Alamos Canyon Aggregate Area." NMED agrees that the IM is not the final remedy; therefore, the Permittees are required to complete the following activities as part of the Phase II Investigation for Upper Los Alamos Canyon Aggregate Area (Phase II investigation):

1. Define the lateral and vertical extent of PCB contamination associated with SWMU 01-001(f) at the top of the drainage, within the drainage, and below LA-SMA-2.
2. After completion of removal activities at locations LA-611150, LA-611183, and LA-611185, the Permittees must collect discrete confirmation samples in accordance with the approved Phase II Investigation Work Plan for Upper Los Alamos Canyon Aggregate Area.
3. NMED's Comment 5 of the Approval with Modifications letter, dated August 25, 2010, directed the Permittees to collect five discrete confirmation samples at the location of the former septic tank to demonstrate that all PCB contaminated soils have been removed. However, the Permittees were unable to be complete the task at that time. As such, the Permittees must collect five discrete confirmation samples at the location of the former septic tank and provide the confirmation results in the Phase II investigation report for Upper Los Alamos Canyon Aggregate Area. The discrete confirmation samples must be collected in accordance with the approved Phase II Investigation Work Plan for Upper Los Alamos Canyon Aggregate Area.
4. Collect appropriate discrete confirmation samples in accordance with the approved Phase II Investigation Work Plan for Upper Los Alamos Canyon Aggregate Area at all locations where MI sampling was conducted.
5. Once the Phase II investigation has been completed, a risk assessment must be completed that includes all constituents of concern.

Comment 5

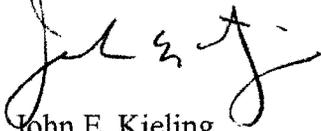
Table 5.1 (PCBs Detected in Confirmation Samples from SWMU 01-001(f) Outfall and Drainage) appears to be missing 12 samples (RE00-08-16151, RE00-08-16155, RE00-08-16157, RE01-10-5536, RE01-10-5539, CALA-10-4618, CALA-10-11201, CALA-10-11202, RE01-10-11576, CALA-10-11227, CALA-10-11228, and CALA-10-11232). Explain why these samples are not included in the table in the response letter and present the analytical results in the Phase II

Messrs. Rael and Graham
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Investigation Report for the Upper Los Alamos Canyon Aggregate Area.
The Permittees must address all comments contained in this approval and submit all required information in the Phase II Investigation Report for Upper Los Alamos Aggregate Area due on **August 30, 2012**. The Permittees must submit the response letter addressing all comments contained in this Approval with Modifications on or before **July 31, 2011**.

Please contact Leona Tsinnajinnie of my staff at (505) 476-6057 if you have questions.

Sincerely,



John E. Kieling
Acting Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
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File: 2011 Reading and LANL General (Los Alamos and Pueblo Canyons, Surface Water)