



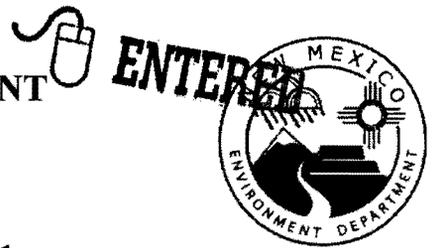
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RON CURRY  
Secretary

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Deputy Secretary

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

October 19, 2010

George J. Rael  
Environmental Operations Manager  
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: DIRECTION TO MODIFY  
PHASE II INVESTIGATION REPORT FOR DELTA PRIME SITE  
AGGREGATE AREA, TECHNICAL AREA 21, REVISION 1  
LOS ALAMOS NATIONAL LABORATORY (LANL),  
EPA ID #NM0890010515  
HWB-LANL-10-025**

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 (collectively, the Permittees) *Phase II Investigation Report for Delta Prime Site Aggregate Area at Technical Area 21, Revision 1* (Report) and accompanying Response to Comments (Response), dated October 2010 and referenced by LA-UR-10-6478/EP2010-0325. The revised Report and Response were submitted in response to NMED's Notice of Disapproval (NOD) dated June 24, 2010. NMED has reviewed the Report and hereby issues this Direction to Modify (Direction). The Permittees must address the following comments, unless otherwise noted, in the next phase of corrective action conducted at Delta Prime Aggregate Area (DP Aggregate). The comments are numbered to correspond to the numbered comments in the NOD and in the Permittees response to the NOD.



**Comment 3 Response, Plate 2**

The legend on Plate 2 still lists “\* Sampling Location – no data” rather than “no concentration detected above background value” as stated in the Response. No revision is necessary.

**Comment 4 Response, Section 6.2.2, Spatial Distribution of COPCs at Consolidated Unit 21-003-99 and SWMU 21-024(c), page 15, bullets 3 and 5**

The comment requested site controls due to polychlorinated biphenyls (PCB) concentrations at depths below those used for the residential and construction worker scenario. While risk is typically not evaluated below a depth of 10 feet below ground surface (ft bgs), LANL did revise the PCB estimation of risk to include the sample collected at 15 ft bgs. Based upon this analysis, if exposure below 10 ft bgs were to occur at some time in the future, the resulting risk is protective to identified receptors. It is agreed that land use restrictions are not needed for this site. The response is acceptable as provided.

**Comment 6 Response, Section 6.3.3, Summary of Human Health Risk-Screening Results, page 17**

The Permittees present two reasonable arguments to disregard detected polycyclic aromatic hydrocarbons (PAHs). The first is that PAHs are not present due to historic site activities because PAHs were not detected from beneath the most likely source, the brick/manhole trench. The second is the possibility that, since the area was a former asphalt parking lot, a piece of the scattered asphalt could have been collected with the sample; the detection of PAHs would therefore not be related to site activities. In any event, the PAH detections are low. The response is acceptable as provided. However, the Permittees should not consider a lack of records indicating use of a particular constituent at a site to be justification for not including such a constituent in a risk assessment.

**Comment 9 Response, Section 6.9.3, Summary of Human Health Risk-Screening Results, 21-023(a)-99, page 27**

The elevated levels of PAHs appear to be concentrated in samples collected from three to four ft bgs (sample location 21-603010). No other organics or inorganic compounds were detected at elevated levels in this sample. If the PAHs were due to migration from either the former septic/piping systems or runoff, a trending of PAHs detections would be expected. Since there is no gradual increase or decrease of concentrations (the detections are predominately limited to a single location) it is plausible to assume that a piece of asphalt could have been collected with the sample. The Permittees must propose to resample this location during the Phase III investigations to confirm the presence or absence of PAHs.

**Comment 11 Response, Section 6.12.3, Summary of Human Health Risk-Screening Results, SWMU 21-024(d), page 31, paragraph 3**

The response is acceptable as provided. However, the argument of site concentrations and/or exposure point concentrations being within the range of background may not be used in lieu of a statistical comparison of data, if sufficient data are available.

**Comment 15 Response, Section 6.24.2, Spatial Distribution of COPCs at SWMU 21-027(c), page 49, bullet 3**

While concentrations of lead are well below the New Mexico Soil Screening Level of 400 mg/kg and it is unlikely that additional sampling would result in a change to the risk assessment for lead, Los Alamos Canyon Reach LA-2W receives storm water runoff and sediment from Los Alamos Canyon and from a significant portion of TA-21. Reach LA-2W does not provide data acceptable for use in determining the extent of lead contamination specifically related to SWMU 21-027(c).

**Comment 17 Response, Section 6.25.1.2, Inorganic Chemicals in Tuff, page 52, paragraphs 12-14**

The detected concentrations of selenium, silver and thallium are well below risk screening levels and it is unlikely that additional sampling would result in a change to the risk assessment. The Permittees should have included a discussion on the usefulness of the data for this project and its relevance to the risk assessment. No additional work is required.

**Comment 25 Response, Appendix E, Diesel Tank 21-57 Spill Site Investigation**

As stated in the NOD, concentrations of diesel range organics (DRO) are present in soils and tuff at levels greater than the cleanup levels listed in the NMED TPH Screening Guidelines (October 2006). The Response does not address these elevated levels nor does it propose additional action to address the soils within ten feet of the ground surface that contain DRO at concentrations that exceed the TPH screening guidelines for diesel #2/crankcase oil. As specified in the NOD, the Permittees must remediate contaminated soil in the vicinity of the TA-21-57 aboveground diesel tank to levels that comply with NMED's TPH Screening guidelines and to depths acceptable to NMED. In the Response, the Permittees state that compliance with the requirements of a not-yet-submitted report to the Petroleum Storage Tank Bureau constitutes compliance with all environmental regulations. This statement is not correct, because the Permittees must comply with all applicable regulations and the March 1, 2005 Consent Order at sites where releases of contaminants to the environment have occurred. The Permittees must propose additional work to address the diesel contamination related to Tank 21-57 as part of the Phase III Investigation Work Plan.

**Comment 31 Response, Appendix H, Section H-4.2.19, Consolidated Unit 21-026(a)-99,  
page H-31**

The response is adequate as provided because removal of soil for PAHs is proposed.

The Permittees must address all comments in this letter in the Phase 3 Investigation Work Plan, where indicated. The Permittees must submit the phase 3 Investigation Work Plan no later than **July 31, 2011**. 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.

Please contact Dave Cobrain at (505) 476-6055 if you have questions.

Sincerely,



James P. Bearzi  
Chief  
Hazardous Waste Bureau

JPB:dc

cc: J. Kieling, NMED HWB  
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L. King, EPA 6PD-N  
B. Criswell, EP-TA-21, MS C349  
M. Thacker, EP-TA-21, MS C349  
W. Woodworth, DOE-LASO, MS A316  
S. Veenis, EP-CAP, MS M992  
D. Rhodes, DOE-LASO, MS A316

File: '10 LANL, TA-21 (SWMUs 21-012(b), 21-024(a), 21-024(e), 21-024(g), Consolidated Unit 21-024(l)-99, SWMU 21-024(o), Consolidated Unit 21-026(a)-99, and SWMU 21-027(c), Consolidated Unit 21-006(c)-99, SWMU 21-022(f), Consolidated Unit 21-022(h)-99 and 21-023(a)-99, and SWMUs 21-024(b), 21-024(d), 21-024(h), 21-024(i), 21-024(j), 21-024(k), 21-024(n), and 21-027(a), AOC 21-002(b), SWMUs 21-009, and 21-013(c), Consolidated Unit 21-003-99, 21-024(c))