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Date: January 22, 2009
Refer To: EP2009-0015

James P. Bearzi, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Submittal of the Response to the Notice of Disapproval for the Phase 2 Investigation Report for the TA-16-340 Complex, Solid Waste Management Units 13-003(a)-99, 16-003(n)-99, 16-003(o), 16-026(j2), and 16-029(f) at Technical Area 16 and Revision 1

Dear Mr. Bearzi:

Enclosed are two hard copies with electronic files of the response to the notice of disapproval for the Phase 2 Investigation Report for the TA-16-340 Complex, Solid Waste Management Units 13-003(a)-99, 16-003(n)-99, 16-003(o), 16-026(j2), and 16-029(f) and Revision 1 of the report. Also enclosed is an electronic copy of a redline/strikeout version of the work plan that includes all changes made in response to the New Mexico Environment's (NMED's) notice of disapproval. A table detailing where revisions have been made to the work plan with cross-references to NMED's numbered comments is also included.

If you have questions, please call John McCann at (505) 665-1091 (jmccann@lanl.gov) or Woody Woodworth at (505) 665-5820 (lwoodworth@doeal.gov).

Sincerely,

Michael J. Graham, Associate Director
Environmental Programs
Los Alamos National Laboratory

Sincerely,

David R. Gregory, Project Director
Environmental Operations
Los Alamos Site Office

MG/DG/DM/JM:sm

Enclosures: Two hard copies with electronic files:
1) Response to the Notice of Disapproval for the Phase 2 Investigation Report for the TA-16-340 Complex, Solid Waste Management Units 13-003(a)-99, 16-003(n)-99, 16-003(o), 16-026(j2), and 16-029(f) (LA-UR-09-0308)
2) Phase 2 Investigation Report for the TA-16-340 Complex, Solid Waste Management Units 13-003(a)-99, 16-003(n)-99, 16-003(o), 16-026(j2), and 16-029(f) and Revision 1, Revision 1 (LA-UR-09-0309)
3) An electronic copy of the redline-strikeout version of the plan that includes all changes and edits to the document
4) Cross-reference table of NMED NOD comments and revisions to the report

Cy: (w/enc.)
Neil Weber, San Ildefonso Pueblo
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Cross-Reference of New Mexico Environment Department Notice of Disapproval Comments and Revisions to the TA-16-340 Complex Phase II Investigation Report

NMED NOD Comment No.	Summary of NOD Comment Requirement	Section(s) in Original Report	Section(s) in Revised Report	Nature of Revision
General Comments				
1	The only area in the Technical Area 16 (TA-16) 340 Complex where industrial risk exceeded the target risk level of 1E-05 was at Solid Waste Management Unit (SWMU) 16-003(o). The primary drivers for the excess risk were benzo(a)pyrene and arsenic. The Permittees must clarify how locations for soil removal at the SWMU were determined and why the area of contaminated soil was not included in the 2008 soil removal activities.	n/a*	Section 4.3.5	The text has been revised to state that areas were not proposed for soil removal because risk calculations indicated that cleanup goals could be attained without removing soil from these locations.
2	The Permittees must clarify the rationale for using different databases in assessing physical and chemical properties and the potential for contaminants to migrate to groundwater. For example, it is not clear why the Pennsylvania database was used over the Region 6 medium-specific screening level database or why multiple databases were used to derive the physical and chemical data.	n/a	Appendix I, section I-3.2.2.1 and Table I-3.2-3	The reference to the Pennsylvania Department of Environmental Protection database has been deleted in the text and from the table. The text indicates that all Henry's law constants were obtained from New Mexico Environment Department (NMED) guidance (NMED 2006, 092513). A footnote has also been added to Table I-3.2-3 stating that the Henry's law constants are from NMED guidance. As in previous risk appendixes, the Risk Assessment Information System database is the primary source of physical and chemical property data because it is a comprehensive, readily accessible, and user friendly database. The U.S. Environmental Protection Agency database is the secondary source, and other sources are used as necessary to obtain data for a particular chemical.

NMED NOD Comment No.	Summary of NOD Comment Requirement	Section(s) in Original Report	Section(s) in Revised Report	Nature of Revision
3	Regional screening levels (RSLs) were posted as interregional screening levels for the U.S. Environmental Protection Agency (EPA) Regions 3, 6, and 9 in July 2008. These screening levels now supersede the previously used EPA Region 6 media-specific screening levels or the EPA Region 9 preliminary remediation goals. Since the risk assessment was conservative, no modification of screening is warranted.	n/a	n/a	No revisions are necessary, per the comment.
4	The Permittees were directed to evaluate the construction worker scenario for the TA-16-340 Complex in the approval letter for the investigation work plan NMED issued on June 28, 2004. The Permittees must conduct a construction worker evaluation and include it in the revised investigation report.	n/a	Appendix I, sections I-4.3 and I-4.5, Appendix I tables; executive summary and section 7.2.1	The construction worker has been evaluated for each site and presented in Appendix I and in section 7.2.1 of the main text.
5	NMED will include the requirements and schedule for groundwater, surface water, and pore-gas monitoring at the time of approval of the report.	n/a	n/a	No response required, per NMED's comment.
Specific Comments				
1	The erosion potential scores reported in Appendix A of the Draft National Pollution Discharge Elimination System permit are different from the values reported in this investigation report. Revise the text and associated surface water assessment for TA-16-340 Complex sites based on the most recent erosion potential scores.	Section 4.7	Section 4.7	The TA-16-340 Complex sites were rescored for erosion potential in 2008. Text has been added to the discussion of the surface water assessment to include the more recent scores.
2	Revise Table 5.2-1 by adding two table notes and removing one note.	Table 5.2-1	Table 5.2-1	Table 5.2-1 has been revised: note "a" was added to 1,3-dinitrobenzene and 1,3,5-trinitrobenzene, and note "a" was removed from carbon disulfide. A column listing construction worker soil screening levels (SSLs) has also been added per General Comment 4.

NMED NOD Comment No.	Summary of NOD Comment Requirement	Section(s) in Original Report	Section(s) in Revised Report	Nature of Revision
3	Revise the text to clarify why the lateral extent of copper contamination was defined because copper was detected at 33 mg/kg at downgradient location 16-603400 at a higher concentration than most detected concentrations reported at upgradient former sumps.	Appendix H, section H-8.3.1	Appendix H, section H-8.3.1	Copper was detected in the alluvium at a concentration of 182 mg/kg at location 16-24894 within SWMU 16-003(o)-west. This is the highest concentration of copper at SWMU 16-003(o)-west. The 33 mg/kg in the alluvium at downgradient location 16-603400 represents a lateral decrease in copper concentration from location 16-24894. This information has been included in the revised section H-8.3.1. The text in Appendix H has been revised to indicate that copper concentrations decrease laterally.
4	Correct the typographical error to show that arsenic was detected at historical locations 16-23651 and 16-23653, and not at locations 16-25651 and 16-25653.	Appendix H, section H-8.3.1	Appendix H, section H-8.3.1	Text in Appendix H has been revised to indicate arsenic was detected at lower concentrations at historical locations 16-23651 and 16-23653.
5	Revise the text to indicate that acetone was detected at historical location 16-24906 at 0.212 mg/kg and was not detected at location 16-603406.	Appendix H, section H-8.3.2	Appendix H, section H-8.3.2	Text in Appendix H has been revised to indicate acetone was detected at a concentration of 0.212 mg/kg at historical location 16-24906.
6	Resolve discrepancies and revise the text to clarify trends in acetone and propylene concentrations in pore gas.	Appendix H, section H-8.3.2	Appendix H, section H-8.3.2	Text in Appendix H has been revised to accurately present the acetone and propylene concentrations in pore gas in the three boreholes.
7	Revise the text and Plate 6 to show that chromium was detected at 8.34 mg/kg at location 16-603405 during 2008 investigations. State in the text that perchlorate was not analyzed during 2008 investigations.	Appendix H, section H-8.4.1; Plate 6	Appendix H, section H-8.4.1; Plate 6	Text in Appendix H and Plate 6 have been revised to include the chromium concentration of 8.34 mg/kg at a depth of 1.5 to 2.0 ft at location 16-603405. The text has been revised to indicate perchlorate was not analyzed in all 2008 samples collected at SWMUs 16-026(j2) and 16-029(f).
8	Revise the text to indicate arsenic was detected in two samples in the downgradient well, cobalt was detected at maximum concentrations in the middle alluvial well, and manganese was detected at maximum concentrations in the most downgradient well.	Appendix H, section H-8.5.1	Appendix H, section H-8.5.1	Text in Appendix H has been revised to accurately present the concentrations of arsenic, cobalt, and manganese in the three alluvial groundwater wells.

NMED NOD Comment No.	Summary of NOD Comment Requirement	Section(s) in Original Report	Section(s) in Revised Report	Nature of Revision
9	Revise text to indicate that one filtered sample collected at the downgradient location contained the highest concentrations of iron, strontium, vanadium, and zinc; no clear trends for lead were observed; and unfiltered sample collected at the downgradient location contained the highest concentrations of most of the inorganic chemicals.	Appendix H, section H-8.5.4	Appendix H, section H-8.5.4	Text in Appendix H has been revised to accurately present the inorganic chemical concentrations in filtered and unfiltered surface water samples at Fishladder Spring and Fishladder Canyon at Cañon de Valle.
10	Revise the text to show the exposure point concentration (EPC) for arsenic is 10.2 mg/kg, which is below the industrial soil screening level (SSL) of 17.7mg/kg.	Appendix I, section I-4.3	Appendix I, section I-4.3	Text in Appendix I has been revised to indicate the EPC for arsenic is not above the industrial SSL.
11	Several constituents were eliminated as chemicals of potential ecological concern (COPEC) because of low detection frequencies, low potential for toxicity, and/or no available ecological screening level (ESL) in the Ecorisk database. The Permittees must discuss COPECs in the uncertainty analysis and revise the text accordingly.	Appendix I, section I-5.4.8	n/a	No revisions to section I-5.4.8 are necessary. The discussion of COPECs without ESLs is already included in the uncertainty analysis, which is where the comment indicates the discussions should be.
12	Revise Table I-2.3-1 and the associated risk screening text using the EPC of 0.135 mg/kg (not 0.22 mg/kg) for benzo(a)pyrene.	Appendix I, Section I-4.3, Table I-2.3-1	Appendix I, Section I-4.3, Table I-2.3-1	Tables I-2.3-1 and I-4.3-1 and the risk screening discussion in Appendix I have been revised using the EPC of 0.135 mg/kg for benzo(a)pyrene.
n/a	n/a	Section 8	Section 8	The recommendations section was modified to clarify site status.
n/a	n/a	Throughout	Throughout	Minor editorial changes were made throughout the document for the sake of correctness and clarity.

*n/a = Not applicable.