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Date: July 25, 2008
Refer To: EP2008-0390

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 Investigation Report for Pueblo Canyon Aggregate Area and Revision 1

Dear Mr. Bearzi:

Enclosed please find two hard copies with electronic files of the response to the notice of disapproval for the Investigation Report for Pueblo Canyon Aggregate Area and Revision 1 of the report. Also enclosed is an electronic copy of a redline/strikeout version of the report showing the changes made in response to the New Mexico Environment Department's (NMED's) notice of disapproval. A cross-reference table detailing the revisions to the original investigation report and NMED's comments is also included.

If you have any questions, please contact Becky Coel-Roback at (505) 665-5011 (becky_cr@lanl.gov) or Cheryl Rodriguez at (505) 845-5804 (crodriguez2@doeal.gov).

Sincerely,

Susan G. Stiger, Associate Director
Environmental Programs
Los Alamos National Laboratory

Sincerely,

for

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

SS/DG/DM/BCR:sm

Enclosures: Two hard copies with electronic files:
1) Response to the Notice of Disapproval for the Investigation Report for Pueblo Canyon Aggregate Area (EP2008-0390)
2) Investigation Work Plan for Upper Sandia Canyon Aggregate Area, Revision 1 (EP2008-0391)
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 comments

Cy: (w/enc.)
Becky Coel-Roback, EP-CAP, MS M992
RPF, MS M707 (with two CDs)
Public Reading Room, MS M992

Cy: (Letter and CD only)
Laurie King, EPA Region 6, Dallas, TX
Steve Yanicak, NMED-OB, White Rock, NM
Kishore Ajmera, Shaw
Cheryl Rodriguez, DOE-LASO, MS A316
Kristine Smeltz, EP-WES, MS M992
EP-CAP File, MS M992

Cy: (w/o enc.)
Tom Skibitski, NMED-OB, Santa Fe, NM
Alison Bennett, DOE-LASO (date-stamped letter emailed)
Susan G. Stiger, ADEP, MS M991
Alison M. Dorries, EP-WES, MS M992
Dave McInroy, EP-CAP, MS M992
IRM-RMMSO, MS A150 (date-stamped letter emailed)

Cross-Reference of NMED NOD Comments (June 27, 2008) and Revisions to the Pueblo Canyon Aggregate Area Investigation Report

NMED NOD Comment No.	Summary of NMED NOD Comment	Sections/ Page(s) in Original Report	Sections/Page(s) in Revised Report	Nature of Revision to Investigation Report
General Comment				
1	Revise the report to include the decision criteria used to determine where an industrial (office) worker was evaluated. In addition, revise the risk assessment to address site risks associated with a construction (intrusive) scenario.	n/a*	• Sections 6.0, 8.0, 8.2.2, 9.0, Tables 6.0-1, 6.0-2 • Appendix H, Sections H-2.2, H-4.0, H-4.1, H-4.2.2, H-4.3.2 (p. H-18), H-4.4 (p. H-22), H-6.1, Tables H-2.2-4, H-2.2-5, H-4.0-1, H-4.1-1, H-4.1-3, H-4.2-6, H-4.2-7, Figure 3.0-1	The main text and Appendix H of the report has been updated to include the use of the construction worker scenario at AOC 00-018(b).
Specific Comments				
1	In light of the site activities and changed conditions at the SWMU discussed above, the Permittees must submit one or more site figures showing the locations of the former WWTP underground piping and associated control valves and structures. The Permittees must review underground piping layouts and propose additional sampling locations to determine potential impacts on undisturbed soil and tuff beneath piping, valves and other structures that may be contaminant source areas.	Section 8.1.1, p. 41	n/a*	No revision to the investigation report is necessary.
2	The affected figures must be revised to reflect current site conditions with respect to configuration of the site sludge beds. The Report text must be revised to reflect current and planned site operations.	Figures 3.9-2, 7.4-1, 7.4-2, and 7.4-3, pp. 66, 85, 86, and 87	• Figures 3.9-2, 7.4-1, 7.4-2, and 7.4-3, pp. 66, 85, 86, and 87 • Sections 2.2.1, 2.2.3, 4.2.2,	The figures have been updated to show the new and former sludge beds. The text has been updated to indicate that the wastewater treatment plant is currently inactive and may be demolished in 1 to 2 yr.

NMED NOD Comment No.	Summary of NMED NOD Comment	Sections/ Page(s) in Original Report	Sections/Page(s) in Revised Report	Nature of Revision to Investigation Report
3	The concentrations of several PAHs are elevated at sample location ID 00-04890 which was collected within the assumed septic tank basin area at a depth of 7.0-7.8 feet bgs. Samples obtained adjacent to (ID 00-25491) the basin or angled beneath the basin (ID 00-25490) did not contain detectable concentrations of PAHs, indicating the lateral extent of PAHs within the basin is very limited. See also Specific Comment 14 below.	Section 8.3.1, p. 43	• Figures 3.9-3, 7.5-1, 7.5-2, and 7.5-3 • Section B-17.3.3	Text has been added to clarify the vertical extent of PAHs in the area of the septic tank at 00 030(d) because no PAHs have been detected in the deepest borehole near the tank and angled borehole beneath the tank. In addition, the figures have been modified to include the trace of the angled borehole to show sampling locations relative to the highest PAH detections.
4	Arsenic exceeds the NMED residential soil screening level in the 4.5-5.0 foot sample interval at location ID 00-04782. Since deeper sample interval data is not available, the vertical extent of arsenic has not been determined at this location. However, nearby samples at comparable (or deeper) depths do not indicate a significant site problem with arsenic. No response is required.	Section 8.9.1, p. 48	n/a	No revision to the investigation report is necessary.
5	The sample collected farthest down slope from the AOC (ID 00-25517) contained arsenic at concentrations above background values and above NMED residential soil screening levels. The Permittees must submit a plan for collection of an additional sample immediately down slope from location ID 00-25517 to verify that the horizontal and vertical extent has been defined with respect to the canyon area.	Section 8.11.1, p. 50	Appendix B, Section B-17.11.1	The discussion of nature and extent has been expanded to include the information presented in the response to Specific Comment 5.
6	The Permittees have recommended additional evaluation of the site at location ID 00-25486 by collecting two deeper samples for analyses of TAL metals. NMED concurs with the Permittees' recommendation. The Permittees must submit a plan outlining the proposed activities required to complete the evaluation.	Section 9.2.1	n/a	No revision to the investigation report is necessary.

NMED NOD Comment No.	Summary of NMED NOD Comment	Sections/ Page(s) in Original Report	Sections/Page(s) in Revised Report	Nature of Revision to Investigation Report
7	The Permittees have recommended a limited removal action at the site to target PAHs and other contributors to excess cancer risk in the former tank and outfall areas. NMED concurs with the Permittees' recommendation. The Permittees must submit a plan outlining the proposed removal activities, associated confirmation sampling, and re-evaluation of the site risks.	Section 9.2.2	n/a	No revision to the investigation report is necessary.
8	The Permittees have recommended additional evaluation of the site at location ID 31-01008 by collecting two deeper samples for analyses of TAL metals. NMED concurs with the Permittees' recommendation. The Permittees must submit a plan outlining the proposed activities required to complete the evaluation.	Section 9.2.2	n/a	No revision to the investigation report is necessary.
9	The Permittees have recommended additional evaluation of the site at location ID 31-01008 by collecting two deeper samples for analyses of TAL metals. NMED concurs with the Permittees' recommendation since implementation of the recommendation will provide for determination of the vertical extent of contamination at that location. The Permittees must also propose two additional sampling locations. The Permittees must submit a plan outlining the proposed activities required to complete the evaluation.	Section 9.2.2	• Section 9.2.4 • Appendix B, Sections B-17.15.1 and B-17.15.4	
10	Sample ID discrepancies were noted between the site figures and data summary tables. For example, Table 7.6-1 lists sample IDs of PU-60137 and PU-60138 while Figure 7.6-1 shows sample IDs PU-601317 and PU-601318. Review the figures and tables, edit as needed, and submit corrected versions of each.	Figures 7.6-1, 7.6-2, 7.6-3, and Tables 7.6-1, 7.6-3	• Figures 3.9-4, 7.6-1, 7.6-2, and 7.6-3 • Section 4.2.4	The information in the tables is correct. The figures have been revised to agree with the tables. Text has also been corrected.

NMED NOD Comment No.	Summary of NMED NOD Comment	Sections/ Page(s) in Original Report	Sections/Page(s) in Revised Report	Nature of Revision to Investigation Report
11	Ecological risk was evaluated for exposure to residual contamination at each site unless the site was paved. Either address the ecological risk posed by underlying soil or provide controls to ensure that the sites will remain paved or indicate other measures that will be taken to protect ecological receptors from underlying soil.	Appendix H, Section H-3.1, p. H-5	• Section 8.12.3 • Appendix H, Section H-3.1, H-5.1	The main text and Appendix H have been revised to discuss the zoning of the area around SWMU 00-039
12	The second sentence should indicate that soil screening levels were adjusted from a risk level of 10^{-6}, not 10^{-5}. Correct the error and submit the corrected revision.	Appendix H, Section H-4.1, p. H-11	Section H-4.1, p. H-12	The text has been corrected as noted.
13	The second sentence should refer to the industrial scenario and not the recreational scenario. Correct the error and submit the corrected revision.	Appendix H, Section H-4.2.2, p. H-12	Section H-4.2.2	The text has been corrected but now cites the construction worker scenario rather than the industrial scenario, per General Comment 1.
14	The total excess cancer risk for the residential scenario was exceeded due to the use of the maximum detected concentration for four PAHs. When average concentrations were applied for these PAHs, the total cancer risk dropped to within acceptable limits. However, the use of the mean concentration is not typical practice and is inconsistent with EPA guidance. The Permittees must determine whether deeper samples are or are not necessary to determine the vertical extent of contamination in the septic tank area. In addition, based upon the detections above residential risk-based levels with depth in the septic tank, it does not appear that the site meets the criteria for residential release with no restrictions. See also Specific Comment three above.	Appendix H, Section H-4.3.2, p. H-18	• Section 8.3.2 • Appendix H, Section H-3.3, Section H-4.3.2 (p. H-19), Section H-4.4 (p. H-22), Section H-6.1	The text in Appendix H was revised to include a discussion of the determination of risk using various EPCs (maximum values, means, and 95% UCL generated by ProUCL).

NMED NOD Comment No.	Summary of NMED NOD Comment	Sections/ Page(s) in Original Report	Sections/Page(s) in Revised Report	Nature of Revision to Investigation Report
15	The total excess cancer risk is above the target risk level when calculated using the maximum detected concentrations as EPCs. However, when average concentrations were applied, the target level was still exceeded. An industrial risk assessment should be conducted (industrial and construction scenario) and if risk limits allow, based on these analyses, restrictions limiting use to industrial use only will be placed on this site.	Appendix H, Section H-4.3.2, p. H-19	See response to Specific Comment 7	No revision to the investigation report is necessary.
16	For each of the areas addressed under this investigation, justification was provided for exclusion of COPEC from additional evaluation in the ecological risk assessments based upon a relative comparison of the EPCs to background concentrations for both soil and tuff. By not distinguishing whether the potentially elevated concentration is associated with a sample collected from soil or tuff, one of the media could potentially be elevated with respect to background and require additional analysis. For SWMU 00-018(a), barium must be retained as a COPEC and additional analysis of whether there is unacceptable risk must be evaluated. Revise Section H-5.4.4 to include a medium-specific background evaluation of COPECs detected in soil and tuff at each site.	Appendix H, Section H-5.4.4, p. H-34	n/a	No revision to the investigation report is necessary.
17	The Los Alamos Ecorisk database (release 2.2) was the only source used for obtaining ecological screening levels (ESLs) used in the ecological screening assessment. However, several chemical are excluded from evaluation, for which toxicity data and screening levels are available in literature and on the Environmental Protection Agency's (EPA) Integration Risk Information System (IRIS) database. Exclusion of these chemicals in Ecorisk may be a function of the database being over three years old. Revise the ESLs to include a more complete assessment of toxicological data, derivation of ESLs and associated risks.	Appendix H, Table H-5.3-1, pp. H-213–H-217	n/a	No revision to the investigation report is necessary.

NMED NOD Comment No.	Summary of NMED NOD Comment	Sections/ Page(s) in Original Report	Sections/Page(s) in Revised Report	Nature of Revision to Investigation Report
18	These tables provide a comparison of the 95% UCLs to the background reference values. Background concentrations are represented by the UTL. As described in the EPA supplemental guidance to Risk Assessment Guidance for Superfund, exposure to site contaminants over a long period of time using the arithmetic average concentration is most representative. As individuals are assumed to move randomly across an exposure area over time, the spatially averaged soil concentration should be used to estimate the true average contaminant concentration contacted over time. Therefore, the 95% UCL is used for comparison to a screening level that is protective of soil ingestion/inhalation. However, the 95% UTL represents a value that 95% of the population will fall below with 95% confidence. Only individual data points from the site should be compared to the background UTL. Revise the risk assessment for each site where individual concentrations exceed the background UTL, and provide additional lines of evidence to justify exclusion of constituents as COPCs.	Appendix H, Tables H-5.4-1 through H-5.4-12, pp. H-252–H-257	n/a	No revision to the investigation report is necessary.
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.