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APR 2008
NMED Hazardous
Waste Bureau

National Nuclear Security Administration
Los Alamos Site Office, MS A316
Environmental Restoration Program
Los Alamos, New Mexico 87544
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Date: April 30, 2008
Refer To: EP2008-0171

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: Response to the Notice of Disapproval for the Supplemental Investigation Report for Consolidated Unit 21-018(a)-99, Material Disposal Area V, at Technical Area 21

Dear Mr. Bearzi:

Enclosed please find two hard copies with electronic files of the response to the "Notice of Disapproval for the Supplemental Investigation Report for Consolidated Unit 21-018(a)-99, Material Disposal Area V, at Technical Area 21, Los Alamos National Laboratory, EPA ID #NM0890010515, HWB-LANL-08-003," dated March 4, 2008, and Revision 1 of that report. Also enclosed is an electronic copy of a redline/strikeout version of the report showing the changes made in response to the notice of disapproval. A cross-reference table detailing the revisions to the original work plan that cross-references the New Mexico Environment Department's (NMED's) comments is also included.

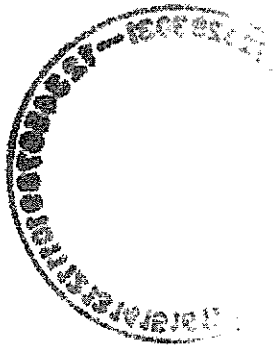
At this time, Los Alamos National Laboratory (the Laboratory) is not submitting a separate vapor-monitoring plan for tritium at Material Disposal Area (MDA) V. The Laboratory is currently evaluating potential tritium below Technical Area 21 and will consider issues of extent at MDA V in the evaluation. Once complete, the Laboratory will submit the vapor-monitoring plan to NMED. If you have any questions, please contact Ron Rager at (505) 231-7834 (rrager@lanl.gov) or Woody Woodworth at (505) 665-5820 (lwoodworth@doeal.gov).

Sincerely,

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

Sincerely,

David R. Gregory, Project Director
Department of Energy
Los Alamos Site Office



SG/DG/AC/RR:sm

Enclosures: Two hard copies with electronic files:
1) Response to the Notice of Disapproval for the Supplemental Investigation Report for Consolidated Unit 21-018(a)-99, Material Disposal Area V, at Technical Area 21 (EP2008-0171)
2) Supplemental Investigation Report for Consolidated Unit 21-018(a)-99, Material Disposal Area V, at Technical Area 21, Revision 1 (EP2008-0172)
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.)
Ron Rager, EP-TA-21, MS C349
RPF, MS M707 (with two CDs)
Public Reading Room, MS M992

Cy: (Letter and CD only)
Laurie King, EPA Region 6
Woody Woodworth, DOE-LASO, MS A316
Devon Jercinovic, SHAW
Peggy Reneau, EP-WES, MS M992
EP-TA-21 File, MS C349

Cy: (w/o enc.)
Tom Skibitski, NMED-OB, Santa Fe, NM
Melanie Skeet, DOE-LASO (date-stamp letter emailed)
Susan G. Stiger, ADEP, MS M991
Allan Chaloupka, EP-TA-21, MS M992
Alison M. Dorries, WES-DO, MS M992
IRM-RMMSO, MS A150

Cross-Reference of NMED NOD Comments (March 4, 2008) and Revisions to the MDA V Supplemental 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 Response and Revision to Supplemental Investigation Report
n/a*	A revised vapor-monitoring plan must be submitted as a separate document.	Appendix D	n/a	Appendix D was deleted as requested by the New Mexico Environment Department (NMED), and a comprehensive Technical Area 21 (TA-21) tritium data need evaluation, including installation of a tritium vapor-monitoring well at location 21-24525, will be developed as a separate document. See also responses to Specific Comments 3 and 4.
Specific Comments				
1	Explain why postexcavation samples were not analyzed for thorium-228 (per results in Tables 5.5-2 and B-3.0-1).	Table 5.5-2 Table B-3.0-1	Table 5.5-2 Table B-3.0-1	Postexcavation samples were analyzed for thorium-228 and should have been reported as not detected above background values. The reanalysis of the postexcavation samples for thorium-228 is provided as the notice of disapproval (NOD) response. Radionuclide analytical results tables were revised accordingly.
2	Clarify the purpose of Table 6.4-1.	Table 6.4-1	n/a	The purpose of Table 6.4-1 is clarified in the NOD response. No revision to the document is required based on this comment.
3	The indoor air pathway should be evaluated for the post-excavation subsurface soil data.	Section D-2.1 Appendix H	n/a	Volatile organic compounds (VOCs) in pore gas were evaluated in the 2007 revision 1 of the original MDA V investigation report. No pore-gas sampling was required or obtained for the 2008 supplemental investigation report because the contaminant source was very shallow. Therefore, the indoor air pathway was not evaluated and no revisions to the 2008 supplemental investigation report are required. Appendix D was deleted as requested by NMED, and a comprehensive TA-21 tritium data need evaluation, including installation of a tritium vapor-monitoring well at location 21-24525, will be developed as a separate document. See also responses to Specific Comment 4.

NMED NOD Comment No.	Summary of NMED NOD Comment	Sections/Page(s) in Original Report	Sections/Page(s) in Revised Report	Nature of Response and Revision to Supplemental Investigation Report
3	Additional information is required for NMED to make a determination of "Corrective Action Complete" for MDA V. Discuss how the results of tritium vapor monitoring will be used to: define the extent of vapor-phase tritium; determine associated migration pathways; evaluate the potential for an adverse effect on groundwater; and evaluate potential risk.	Section D-2.1 Appendix H	n/a	Based on the risk assessment process for nonradiological contaminants as required by the Compliance Order on Consent, Los Alamos National Laboratory (the Laboratory) has concluded that MDA V meets the criteria for unrestricted (residential) land use. Appendix D was deleted as requested by NMED, and a comprehensive TA-21 tritium data need evaluation, including installation of a tritium vapor-monitoring well at location 21-24525, will be developed as a separate document. See also responses to Specific Comment 4.
3	Address the potential for site controls, such as limiting the construction of any building in this area, to be placed on the postexcavation area of MDA V, which would be utilized until NMED determines that the vapor intrusion pathway will not cause undue risk via inhalation of indoor air.	Section D-2.1, Appendix H	n/a	The Laboratory will voluntarily submit a comprehensive sampling and monitoring plan for NMED review and comment for tritium sampling at MDA V following determination of the need for and location of additional tritium vapor-monitoring wells at TA-21. The U.S. Department of Energy will retain ownership of the MDA V site and has no intention of constructing permanent habitable facilities. Appendix D was deleted as requested by NMED, and a comprehensive TA-21 tritium data need evaluation, including installation of a tritium vapor-monitoring well at location 21 24525, will be developed as a separate document. See also responses to Specific Comment 4.
4	Revise the vapor-monitoring plan to include drilling and installation of an additional vapor-monitoring well within 10 ft of borehole location 21-24524. Revise sections D-3.1 (Monitoring Distribution and Frequency), D-3.2 (Monitoring Methods), and D-3.3 (Reporting) to included drilling and sampling of this additional well.	Section D-3.1 Section D-3.2 Section D-3.3	n/a	The proposed installation of a vapor-monitoring well at location 21-02523 is removed from the revised 2008 supplemental investigation report. Appendix D was deleted as requested by NMED, and a comprehensive TA-21 tritium data need evaluation, including installation of a tritium vapor-monitoring well at location 21 24525, will be developed as a separate document. See also responses to Specific Comment 3.
5	For future reports, a comparison of site data to the soil-to-groundwater SSLs based upon a dilution attenuation factor is required.	Sections H-3.2 and H-3.3, pp. H-5–H-7	Section H-3.3, p. H-5	Text has been added to section H-3.3 (Environmental Fate and Transport) to clarify why dilution attenuation factor soil screening levels were not used.

NMED NOD Comment No.	Summary of NMED NOD Comment	Sections/Page(s) in Original Report	Sections/Page(s) in Revised Report	Nature of Response and Revision to Supplemental Investigation Report
6	Discuss the rationale for using Kd values based on a pH of 6.8 in the revised risk assessment. Also provide clarification whether or not removal of soil containing elevated radioactivity resulted in residual soils with a lower pH (closer to 6.8).	Section H-3.3, pp. H-5–H-6	pp. H-5–H-6	The partition coefficient (K_d) values for inorganic chemicals of potential concern (COPCs), as discussed on p. H-5, were taken from NMED guidance (2006, 092513), which does not provide K_d values on the basis of pH and is assumed to be representative of New Mexico soil conditions. The K_d values for radionuclide COPCs, as discussed on p. H-6, were taken from U.S. Environmental Protection Agecny (EPA) guidance (1996, 064708), which also does not provide K_d values on the basis of pH. The text on p. H-5 was revised to delete reference to (EPA 1996, 059902).
7	See Specific Comment 3.	Section H-4.1, p. H-8	n/a	See response(s) to Specific Comment 3. No additional revision to the document is required based on this comment.
8	Provide an explanation for using the Kd for trivalent chromium rather than the Kd for hexavalent chromium	Table H-3.3-1, p. H-23	n/a	The use of the trivalent chromium K_d is clarified in the NOD response. No revision to the document is required based on this comment.
9	Table H-3.3-2 indicates that a Kd is not available for tritium, but the listed source for the radionuclide Kd values (EPA 1996, 064708) does provide a Kd for tritium (9.9)	Table H-3.3-2, p. H-24	Table H-3.3-2	Table H-3.3-2 was revised to include the K_d of 9.9 cm^3/g for tritium listed in EPA (1996, 064708).

*n/a = Not applicable.