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 ENTERED



RON CURRY
Secretary

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Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

April 21, 2010

George J. Rael
Environmental Operations Manager
Los Alamos Site Office
Department of Energy
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Los Alamos, NM 87544

Michael J. Graham
Associate Director Environmental Programs
Los Alamos National Security, LLC
P.O. Box 1663, MS M991
Los Alamos, NM 87545

**RE: NOTICE OF APPROVAL
INVESTIGATION REPORT FOR UPPER LOS ALAMOS CANYON
AGGREGATE AREA, REVISION 1
LOS ALAMOS NATIONAL LABORATORY
EPA ID #NM0890010515
HWB-LANL-09-020**

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, LLC (LANS) (collectively, the Permittees) *Response to the Notice of Disapproval (NOD) and the Investigation Report for Upper Los Alamos Canyon Aggregate Area, Revision 1* (Report), dated February 2010 and referenced by LA-UR-10-0422/EP2010-0021. The Permittees sent a replacement for page 100 and revised electronic files of the Report on February 26, 2010. NMED hereby issues this Notice of Approval for the Report with following comments.

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1. The Permittees' response for NOD Specific Comments #25, 27, 28, 30, 31, 51, and 52 states that notes were added to Table 3.1-1 to explain the discrepancies between soil screening values listed in Table 3.1-1 and in Appendix G. The Permittees did not include aforementioned notes in Table 3.1-1. However, the Permittees revised the corresponding text and tables in Appendix G to clarify and no revision to the Report is necessary.
2. Neither the lateral nor vertical extent of inorganic chemicals is defined at SWMU 01-001(s) (see Section 6.11.3). In the next phase of investigation, the Permittees must propose to collect samples to define both the lateral and vertical extent of inorganic chemicals at SWMU 01-001(s).
3. Review of the data provided in the original Appendix F tables for several constituents (i.e., antimony, total cyanide, perchlorate, selenium, and thallium), shows several sites where all of the samples indicated non-detects but the method detection levels were above background. According to the response to the NOD General Comment # 1, statistical evaluations against background will be conducted if there was sufficient data (ten samples). In the event that all of the results are non-detects, a comparison to the range of background detections will be conducted as well as a comparison to twice the background. The Report does not provide a discussion of how chemicals identified as chemicals of potential concern (COPCs) at certain sites were eliminated from the risk analyses due to the non-statistical comparison of the non-detect data to background. In particular, it appears that this non-statistical method of evaluating the COPCs was conducted for the following sites: 01-001(c): total cyanide and antimony; 01-001(e): total cyanide and antimony; 01-001(t): total cyanide and antimony; 01-001(u): total cyanide; 01-002: perchlorate; 01-003(e): total cyanide and antimony; 01-006(d): selenium; 01-006(g): total cyanide; 01-006(o): total cyanide; 01-007(e): total cyanide; 01-007(j): total cyanide; 03-009(j): selenium; 32-004: total cyanide, antimony and thallium; and 41-001: total cyanide and antimony.

Following the procedure outlined in the response to General Comment # 1, most of the COPCs drop out when comparing maximum non-detect value to twice the background reference value. However, concentrations of some metals are more than twice the background value, and those metals should therefore have been retained as COPCs in the risk analyses:

- 01-002: Since there is no background datum for perchlorate, perchlorate should have been retained as a COPC in the risk assessment.
- 01-003(e): The detection limit for antimony was more than twice the background reference value and should have been retained as a COPC in the risk assessment.
- 03-009(j): The detection limit for selenium was more than twice the background reference value and should have been retained as a COPC in the risk assessment.
- 32-004: The detection limit for antimony in soil was more than twice the background reference value and should have been retained as a COPC in the risk assessment.

- 32-004: The detection limits for thallium in both soil and tuff were more than twice the background reference value and should have been retained as a COPC in the risk assessment.

The data review indicates that inclusion of these COPCs would not change the results of the risk conclusions; therefore, no revisions to the Report are necessary. However, for future evaluations, the Permittees must ensure that chemicals identified as COPCs due to detection limits being above background levels are reviewed accordingly and retained as COPCs in the risk analyses if the method detection limit is more than twice background.

The Permittees recommend in the Report that additional investigations should be conducted at 27 sites to define the nature and extent of contamination and proposed to submit a Phase II investigation work plan six months after approval of this Report. The Permittees must submit the Phase II investigation work plan to NMED no later than October 21, 2010.

Please contact Neelam Dhawan of my staff at (505) 476-6042 should you have any questions.

Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

cc: J. Kieling, NMED HWB
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File: LANL, Upper Los Alamos Canyon Aggregate Area IR, 2010