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Environmental Programs
P.O. Box 1663, MS M991
Los Alamos, New Mexico 87545
(505) 606-2337/FAX (505) 665-1812



National Nuclear Security Administration
Los Alamos Site Office, MS A316
Environmental Restoration Program
Los Alamos, New Mexico 87544
(505) 667-4255/FAX (505) 606-2132

Date: APR 02 2012
Refer To: EP2012-0082

John Kieling, Acting Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Response to Second Direction to Modify, Response to Direction to Modify for Request to Abandon Borehole 50-24817 at Material Disposal Area C, Solid Waste Management Unit 50-009

Dear Mr. Kieling:

The purpose of this letter is to respond to the subject direction to modify letter, received by the U.S. Department of Energy (DOE) and Los Alamos National Security (LANS), LLC, on March 19, 2012. The subject letter requests additional information concerning the costs of abandoning borehole 50-24817 versus replacing the surface casing. As clarified in a March 19, 2012, telephone conversation with the New Mexico Environment Department (NMED), DOE and LANS are providing additional information to support the decision to abandon borehole 50-24817. The borehole was plugged and abandoned on March 26, 2012.

The NMED assertion that installing surface casing is less expensive than abandoning the borehole is correct if no long-term costs for maintenance were considered in the estimate. However, DOE and LANS must evaluate life-cycle costs when comparing alternatives to represent the true cost to DOE. The life-cycle cost comparison indicated that replacing the surface casing and maintaining a borehole that is no longer used would be approximately 1.5 times more expensive than abandoning the borehole. The basis for this cost difference and the justification to abandon the borehole are discussed below.

1. This borehole has been replaced and is no longer used for monitoring; therefore, it would require abandonment sometime in the future. The life-cycle costs for both alternatives, therefore, must include the estimated cost of abandonment.
2. The cost estimate for providing a protective surface casing is based on installing a 4-ft-diameter precast manhole cone with a heavy-duty iron cover, rather than a less expensive surface monument, which has proven to be ineffective at this site. Such covers have been used in similar high-traffic areas at Los Alamos National Laboratory and were found to be protective.



3. Installation of this manhole cone and cover would require excavating an approximately 6-ft by 6-ft by 2-ft-deep hole.
4. Based on past investigations, soil in this location is expected to contain radionuclides above background concentrations (although below cleanup levels), and the excavated/displaced soil would require management and disposal as low-level radioactive waste.
5. After the manhole cone and cover are installed, the asphalt pavement around the manhole cover will have to be repaired.
6. The life-cycle cost for this alternative also includes costs for internal compliance and safety reviews necessitated by the location of the site, which is near an active nuclear facility.
7. Because this borehole was installed in 2005, this would be the third time the surface casing has had to be replaced because of damage from snow-removal equipment. Although the replacement cost of the surface casing is not included in the cost comparison, previous experience indicates it would likely need to be replaced at some point in the future.

If you have any questions, please contact Stephani Swickley at (505) 606-1628 (sfuller@lanl.gov) or Cheryl Rodriguez at (505) 665-5330 (cheryl.rodriguez@nnsa.doe.gov).

Sincerely,



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

Sincerely,



Peter Maggiore, Assistant Manager
Environmental Projects Office
Los Alamos Site Office

MG/PM/DM/SS:sm

Cy: Laurie King, EPA Region 6, Dallas, TX
Steve Yanicak, NMED-DOE-OB, MS M894
Tom Skibitski, NMED-OB, Santa Fe, NM (date-stamped letter emailed)
Annette Russell, DOE-LASO (date-stamped letter emailed)
Cheryl Rodriguez, DOE-LASO, MS A316 (date-stamped letter emailed)
Stephani Swickley, EP-CAP, MS M992 (date-stamped letter emailed)
Dave McInroy, EP-CAP, MS M996 (date-stamped letter emailed)
Michael J. Graham, ADEP, MS M991 (date-stamped letter emailed)
William Alexander, EP-BPS, MS M992 (date-stamped letter emailed)
Public Reading Room, MS M992 (hard copy)
RPF, MS M707 (electronic copy)