Los Alamos
NATIONAL LABORATORY
EST. 1943
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: August 18, 2008
Refer To: EP2008-0404

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 Direction to Modify Bayo Canyon Aggregate Area Investigation Report, Revision 1

Dear Mr. Bearzi:

Los Alamos National Laboratory (the Laboratory) is in receipt of the New Mexico Environment Department's (NMED's) Direction to Modify Investigation Report for Bayo Canyon Aggregate Area, Revision 1, dated May 27, 2008. The Laboratory notes that the direction to modify letter does not specify any modifications to the investigation report. Additionally, the Laboratory has the following responses to NMED's comments, which are included verbatim for clarity.

3. **NMED Comment:** As stated in the NOD, a site must not pose an unacceptable risk under a residential scenario and contaminant concentrations in all samples must be below residential soil screening levels (SSLs)/screening action levels (SALs) in order to obtain a Certificate of Completion (COC) or "corrective action complete without controls". The strontium-90 concentrations in two isolated areas south of the former radiochemistry building do not meet residential SALs nor does the area meet risk under a residential scenario. Of particular concern is that the property is under the control of Los Alamos County, rather than the DOE. Therefore, the Permittees do not have control over land use at this location. NMED also notes that the work scope and schedule are subject to discussions between Los Alamos County and DOE.

   Laboratory Response: The determination of whether a site poses an unacceptable risk is based on exposure point concentrations, not individual analytical results. The exposure point concentration represents the exposure of the receptor at the site and is the basis for the estimated risk/dose at a site. This approach follows standard risk assessment practice and agrees with the U.S. Environmental Protection Agency's risk assessment guidance. The Laboratory has satisfied all requirements of the Consent Order for all sites within Bayo Canyon (former Technical Area 10 [TA-10]). None of the former TA-10 sites poses a potential unacceptable risk under a residential scenario, and therefore, all sites merit certificates of completion for corrective action complete without controls. The issues of the radionuclide detections (strontium-90) above residential screening action levels and land use in Bayo Canyon are addressed below.

8. **NMED Comment:** The Permittees state that Consolidated Unit (CU) 10-002(a)-99, which includes SWMU 10-007, meets the DOE target dose limit under the recreational scenario, but does not meet the dose limit under a residential scenario. Of particular concern is that the property is under the control of Los Alamos County as well as the DOE. Therefore, the Permittees do not have absolute control over land use at this location. NMED also notes that the corrective action will be determined by DOE in consultation with Los Alamos County.

   Laboratory Response: As the Consent Order states, "The voluntary inclusion of such radionuclide information by the Respondents in any plan, report, or other document shall not be enforceable by any entity, including the State, under this Consent Order, because such information falls wholly outside the requirements of this Consent Order." The work plan and schedule for strontium-90 removal within Consolidated Unit 10-002(a)-99 will be developed at the U.S. Department of Energy's (DOE's) direction after discussion with Los Alamos County. The Laboratory expects to finalize a plan with the County for removing the strontium-90 early in fiscal year 2009, pending availability of funding, and will provide a copy of the plan to NMED at that time.

   No nonradionuclide contaminants present at Consolidated Unit 10-002(a)-99 pose a potential unacceptable risk under a residential scenario; that is, no exceedance of the NMED risk levels exists at this site. Limited areas within the consolidated unit do not meet the DOE dose limit for unrestricted release; however, these areas do not present a potential unacceptable dose under the current and reasonably foreseeable future land use (recreational). Samples collected within the 0- to 10-ft-depth interval from these areas indicate the presence of strontium-90 in excess of the residential screening level (5.7 pCi/g) but significantly below construction worker and recreational screening levels (800 and 5600 pCi/g, respectively). The Laboratory has been in regular communication with Los Alamos County to ensure that there are no near-term plans to change the current recreational use of Bayo Canyon.

Based on the response to NMED's comment 8 above, no work plan will be submitted to NMED on August 22, 2008. However, all plans, schedules, and results will be provided to NMED for information in accordance with DOE policy. If you have any questions, please contact Becky Coel-Roback at (505) 665-5011 (becky_cr@lanl.gov) or Cheryl Rodriguez at (505) 665-5330 (crodriguez2@doeal.gov).

Sincerely,

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

Sincerely,

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

SS/DG/DM/BCR:sm

Cy:
Laurie King, EPA Region 6
Steve Yanicak, NMED-OB, White Rock, NM
Tom Skibitski, NMED-OB, Santa Fe, NM
Alison Bennett, DOE-LASO (date-stamp letter emailed)
Cheryl Rodriguez, DOE-LASO, MS A316
Becky Coel-Roback, EP-CAP, MS M992
Dave McInroy, EP-CAP, MS M992
Susan G. Stiger, ADEP, MS M991
Alison M. Dorries, WES-DO, MS M992
Kristine Smeltz, EP-WES, MS M992
EP-CAP File, MS M992
RPF, MS M707 (with two CDs)
Public Reading Room, MS M992
IRM-RMMSO, MS A150 (date-stamp letter emailed)