



**BILL RICHARDSON**  
GOVERNOR

State of New Mexico *General*  
**ENVIRONMENT DEPARTMENT**

*Hazardous Waste Bureau*  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303  
Telephone (505) 428-2500  
Fax (505) 428-2567  
www.nmenv.state.nm.us



**RON CURRY**  
SECRETARY

**DERRITH WATCHMAN-MOORE**  
DEPUTY SECRETARY

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

August 29, 2003

Mr. G. Pete Nanos, Director  
Los Alamos National Laboratory  
P.O. Box 1663, Mail Stop A100  
Los Alamos, New Mexico 87545

Mr. Mat Johansen, Groundwater Program  
Compliance Manager  
DOE-OLASO  
Mail Stop A316  
Los Alamos, New Mexico 87544

**SUBJECT: REVIEW OF THE SAMPLING AND ANALYSIS PLAN (SAP) FOR  
DRILLING AND TESTING CHARACTERIZATION WELLS R-2, R-4, R-  
11, AND R-26  
LOS ALAMOS NATIONAL LABORATORY  
EPA ID# NM0890010515**

Dear Mr. Nanos and Mr. Johansen:

The New Mexico Environment Department (NMED) is in receipt of the SAP for Drilling and Testing Characterization Wells R-2, R-4, R-11, and R-26 at the Los Alamos National Laboratory (the Laboratory), dated July 2003 and referenced by LA-UR-03-4782. NMED has reviewed the document and takes this opportunity to provide comments.

- 1) NMED continues to believe that core collection provides the most useful information if the coring targets specific zones where data are needed to characterize the vadose zone and refine parameters for the hydrogeologic model. The most essential information may not be obtained if core is collected only from the surface to a specified depth.
- 2) Table 1 describes the data quality objectives for the four wells. Several methods of hydrologic testing that may be conducted in the wells are listed in the table. NMED reminds the Laboratory that falling-head slug tests are not an acceptable method of hydrologic testing for any wells located on the Pajarito Plateau (refer to NMED letter dated December 14, 2001).
- 3) Tables 4 and 6 describe the sample collection activities for cuttings and core as well as the



13795

Mr. Nanos and Mr. Johansen  
August 29, 2003  
Page 2

analyses planned for the samples that are collected. Chromium VI, mercury, and PCBs are contaminants of potential concern (COPCs) in Sandia Canyon and must be included as analytes for shallow core and cuttings samples collected from well R-11. Chromium VI and mercury have been detected in surface water samples collected from locations two miles downstream of the TA-3 power plant outfall. PCBs have been detected in sediments in the wetlands in upper Sandia Canyon.

4) Table 7 lists the analyses planned for the groundwater samples that are collected from the four wells. Groundwater samples collected from well R-26 must be analyzed for high explosives (HE) compounds, as they are COPCs at Technical Area-16. HE compounds must be included as analytes for quarterly groundwater sampling to establish a baseline for the well.

5) NMED has submitted comments on the format and contents of the well completion reports submitted in 2003 in a letter to the Laboratory dated August 29, 2003. Sample screening results must be included in the reports. The final total volume of all fluids accumulated at the completion of activities at each well must also be included in the reports. This information will be documented on the daily activity/quality control reports.

6) The drilling plan, which is currently being prepared, should include information regarding the potential use of drilling fluids, the types of fluids that may be used, and the situations in which drilling additives would be used. The plan should also include details regarding the methods that the drillers will use to seal off or otherwise isolate perched groundwater zones that are encountered in order to reduce the potential for cross-contamination. A Waste Characterization Strategy Form (WCSF) should be included in the drilling plan. The WCSF will describe the on-site management of groundwater, cuttings, and drilling media as well as the temporary storage of wastes pending waste characterization and/or disposal.

7) NMED understands that if intermediate depth perched groundwater is encountered while drilling any regional aquifer well, but the well is not screened for further monitoring of the perched zone(s), then the Laboratory will submit a plan to install well(s) to target the intermediate zone(s).

If you have any questions regarding these comments, please contact Carolyn Cooper of my staff at (505) 428-2539.

Mr. Nanos and Mr. Johansen

August 29, 2003

Page 3

Sincerely,



John Young

LANL Corrective Action Project Leader

Permits Management Program

Cc: C. Cooper, NMED HWB  
D. Cobrain, NMED HWB  
C.Voorhees, NMED DOE-OB  
S. Yanicak, NMED DOE-OB, MS J993  
J. Schoeppner, NMED GWQB  
L. King, EPA, 6PD-N  
D. Gregory, DOE OLASO, MS A316  
J. Vozella, DOE OLASO, MS A316  
B. Ramsey, LANL, RRES-DO, MS J591  
D. Stavert, LANL, RRES-DO, MS J591  
N. Quintana, LANL, RRES-ER, MS M992  
C. Nylander, RRES-WQH, MS K497

File: Reading and ~~LANL~~ HWP (General)