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State of New Mexico  
**ENVIRONMENT DEPARTMENT**



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**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

October 25, 2005

Mr. Robert H. Gilkeson  
P.O. Box 670  
Los Alamos, NM 87544

Dear Mr. Gilkeson:

The New Mexico Environment Department (NMED) is in receipt of your August 31, 2005, letter in which you express concerns about groundwater investigations being conducted at Los Alamos National Laboratory (LANL). NMED shares many of your concerns, and takes this opportunity to address the questions and concerns posed in your letter.

NMED is currently reviewing and commenting on the Department of Energy and University of California's (DOE/UC) submittal of the Interim Facility-Wide Groundwater Monitoring Plan (Plan) dated May 2005 and referenced by LA-UR-05-3443. Most of the questions you pose will be addressed by the Plan, our comments on the Plan, or in other documents in NMED's DOE/UC administrative record. In addition, the wells installed under DOE/UC/s "Hydrogeologic Workplan" are characterization wells that may be used for monitoring. If wells completed thus far are not providing reliable, representative data, NMED will require DOE/UC to conduct additional characterization or well construction activities to develop an adequate groundwater monitoring network. Please note that the Plan is an *interim* groundwater monitoring plan, and in no way is presented as a long-term monitoring effort.

To access NMED's administrative record please contact the Hazardous Waste Bureau's Records Custodian. She may be reached by writing:

Ms. Pam Allen  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505



What follows are responses to the nine questions posed in your August 31, 2005, letter.

- 1) Does LANL [Los Alamos National Laboratory] now purge the single-screen wells using procedures and instruments that are in compliance with the above paragraph IX.B.2.i.i?**

DOE/UC is required to purge all wells using procedures and instruments that are in compliance with the well purging requirements outlined in Section IX.B.2.i.i of the March 1, 2005, Compliance Order on Consent (Order) unless otherwise granted a variance by NMED.

- 2) Has NMED granted LANL a variance from the procedure described in the LANL Consent Order for well purging before collection of groundwater samples from the single-screen wells?**

To date no such variance has been requested by DOE/UC or approved by NMED.

- 3) What are the concerns of NMED to improve the methods that are used to collect groundwater samples from the LANL single-screen wells?**

The methods outlined in Section IX of the Consent Order address NMED's overarching concerns regarding the collection of groundwater samples by DOE/UC.

- 4) What are the concerns of NMED for the improper construction of LANL R-15 that a). prevent accurate knowledge of contamination in groundwater, and b). may spread contamination in the regional aquifer?**

DOE/UC has not been granted approval to utilize R-15 in the monitoring network proposed in the Plan.

- 5) Does the NMED LANL Consent Order require a change to the no-purge methods that were used for collecting water samples from the Westbay-equipped wells?**

Under the Order, DOE/UC can request a variance to the sampling procedures outlined in Section XI.B.2.i.i before NMED will consider approving alternative sampling methods. No changes to the Order are required.

- 6) If LANL is now required to purge groundwater from the Westbay-equipped wells, how is the purging performed and monitored to determine that water parameters have stabilized before samples are collected for the analytical suite?**

DOE/UC are required to purge all wells unless otherwise approved by NMED. No variance has been approved at this time.

**7) What are the concerns of NMED to improve the methods that are used to collect groundwater samples from the Westbay wells?**

NMED's concerns regarding the methods to collect samples from any well will be addressed in our comments on the Plan. General requirements are outlined in the Order.

**8) Does NMED recognize that many of the LANL characterization wells provide spurious contaminant data for groundwater because of mistakes in the construction and sampling of the wells? If so, please provide a list of LANL wells with spurious contaminant data.**

Yes. Wells completed at the onset of the Hydrogeologic Workplan have many well construction and development problems due to contractors with little or no experience completing wells. NMED's administrative record for LANL contains many documents that detail these concerns, many of which center around improper well development. Other issues exist, however, particularly for the well drilled early on in the project, including unreasonably drilling times, boreholes sitting open for months prior to well completion, wells not constructed properly, wells inadvertently damaged, and wells not developed in a timely or rigorous manner. As you were involved with the drilling program, and in fact played a key role in the drilling, construction, and development of many of the questionable wells, you are no doubt aware of many of these problems. DOE/UC has replaced many of the contractors and staff involved, and the drilling program has shown marked improvement.

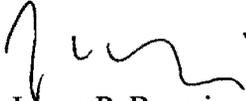
**9) Indeed, LANL reports document that many of the characterization wells do not provide water samples that are representative of groundwater in the aquifer. What is the strategy of NMED to require rehabilitation or replacement of the impacted wells?**

NMED will address the issues regarding the proposed monitoring network in our comments of the Plan and in site-specific investigations.

Thank you for your interest in this important issue.

Mr. Gilkeson  
October 25, 2005  
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Sincerely,



James P. Bearzi  
Chief  
Hazardous Waste Bureau

cc: J. Young, NMED HWB  
D. Cobrain, NMED HWB  
J. Volkerding, NMED DOE OB  
S. Yanicak, NMED DOE OB, MS J993  
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file: Reading and LANL TA-16 [Groundwater]