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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

April 11, 2003

Mr. G. Pete Nanos, Interim Director
Los Alamos National Laboratory
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**SUBJECT: APPROVALS AND RECOMMENDATIONS FOR THE INSTALLATION
OF WELLS DURING THE FISCAL YEAR 2003 AT
LOS ALAMOS NATIONAL LABORATORY (LANL)
EPA ID# NM0890010515**

Dear Mr. Nanos and Mr. Johansen:

The New Mexico Environment Department (NMED) Hazardous Waste Bureau has had recent discussions with the Los Alamos National Laboratory and Department of Energy (the Permittees) regarding the locations of regional wells to be installed during the Fiscal Year (FY) 2003. NMED approved the proposed locations for wells R-2, R-4, and R-11 in a letter dated February 27, 2003. In a meeting on March 27, 2003, the Permittees proposed several additional regional aquifer well locations to NMED. This letter provides our response and recommendations for additional wells to be installed in FY03.

NMED approves of the proposal to install well R-26, the upgradient well near Cañon de Valle, on the downthrown side of the Pajarito Fault. The well will provide both background water quality data for the entire facility and site-specific background information for the ongoing investigations at Technical Area-16. The well's location will help to define the extent of the perched intermediate groundwater present in well R-25 and recharge along the Pajarito Fault. Due to the importance of identifying perched groundwater, NMED concurs with the Permittees' proposal to drill R-26 using air with minimal drilling fluids. Additionally, because the primary purpose of the well is to obtain background geologic, hydrologic, and water quality information, NMED believes that the boring should be cored to its total depth. A fully-cored reference hole



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will provide valuable information for refining the Permittees' geologic and regional flow and transport models.

NMED considers the investigation of groundwater in Mortandad Canyon to be one of the highest priorities at the Laboratory. Consequently, and until the Groundwater Work Plan for Mortandad Canyon can be developed, NMED recommends that the Permittees install two regional wells in the canyon this year. NMED and the Permittees have agreed on the need to focus on determining the nature and extent of contamination at the Facility. The extent of the perchlorate contamination in Mortandad Canyon, present at high levels in intermediate groundwater in well MCOBT-4.4 and in both the intermediate zone and regional aquifer in well R-15, must be investigated. NMED supports installation of an additional regional well in a location between MCOBT-4.4 and R-15. We suggest that Hydrogeologic Workplan (HWP) well R-1 may be moved to this location. The proposed well should be drilled with methods that enable the Permittees to identify perched groundwater. Because perched groundwater is expected to be encountered in this location and is of great importance in this canyon, the well should be constructed to monitor both the perched intermediate zone as well as the regional aquifer.

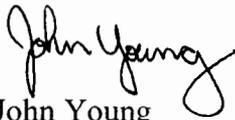
NMED recommends that the Permittees replace Test Well 8 (TW-8). TW-8 was drilled in 1960, is not grouted in place from 62 feet to its total depth of 1065 feet, and may be serving as a conduit for contaminated shallow groundwater. The 1997 Mortandad Canyon Workplan (LA-UR-97-3291) notes that the integrity of the seal may be questionable and that shallow groundwater may be leaking down the well. NMED approves of the general area around the current location of TW-8 for installation of a replacement well. HWP well R-28 may be moved to this location. If there is an acceptable method for removing the well casing, reaming out the borehole, and constructing a properly designed and installed well in the present borehole, NMED will allow the Permittees to use the same borehole for replacement purposes. If the well must be re-drilled in another location, the well should be drilled with methods that enable the Permittees to identify perched groundwater, and the original TW-8 well should be plugged and abandoned after the replacement well has been installed and tested. Perched groundwater may be encountered in this location, and the well should be constructed to monitor any perched intermediate zones that are encountered, as well as the regional aquifer. If perched water is present, the Permittees may propose installing a separate intermediate zone well adjacent to the regional aquifer well.

NMED approves of the Permittees' proposal to replace the intermediate zone well MCOBT-4.4. Although the well replacement and related activities do not strictly fall under the Hydrogeologic Workplan scope, NMED recommends that the Permittees expedite the projected work to ensure that reliable data from the perched intermediate zone in Mortandad Canyon is available and accessible. After the replacement well has been installed and tested, the original MCOBT-4.4 well should be plugged and abandoned.

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

Sincerely,



John Young
LANL Corrective Action Project Leader
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