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PETER MAGGIORE
SECRETARY

MEMORANDUM

TO: File

THROUGH: David Cobrain, Santa Fe Program Manager, Hazardous Waste Bureau *DC*

FROM: John Young, LANL CA Project Leader, Hazardous Waste Bureau *JY*

SUBJECT: **LANL HYDROGEOLOGIC WORKPLAN DATA QUALITY OBJECTIVES
FOR VADOSE ZONE CHARACTERIZATION AND WELL LOCATIONS.**

DATE: June 14, 2002

Los Alamos National Laboratory (LANL) staff conducted two conference calls with the New Mexico Environment Department (NMED) on May 20 and May 29, 2002 regarding data quality objectives and locations of boreholes/wells drilled under the Hydrogeologic Workplan. The boreholes/wells LANL proposed for completion by the end of the current federal fiscal year (FY2002) include R-14, R-16, R-20, R-21, R-23 and R-32. Except for R-14, the proposed location of each borehole is in the general vicinity of TA-54, which contains material disposal areas (MDAs) G, H, L and J. Correspondence dated March 1, 2002 sent from NMED to LANL required that boreholes/wells R-8a, R-11, R-13, R-14, R-18, R-20, R-21 and R-27 be completed by the end of the 2002 calendar year. Two additional boreholes/wells need to be drilled by the end of the calendar year to comply with the proposed Installation Work Plan schedule.

LANL staff refused to collect requested pertinent vadose zone information from the boreholes, citing budget and time constraints. LANL staff also stated that the "TA-54 Performance Assessment" (a non RCRA regulatory document) documents that all necessary subsurface characterization is completed and the contaminant vapor plumes are adequately delineated. NMED does not agree with this conclusion. Additional vadose zone data collection that may be required in the future was deferred to the Material Disposal Area group. LANL agreed to collect core from the surface through the Bandelier Tuff to the upper 50' of Cerros del Rio Basalt. NMED requested core collection from higher permeability, perched groundwater bearing units and other important hydrostratigraphic intervals in the Cerros del Rio Basalt and Puye Formation. LANL declined to collect core from intervals below the upper 50' of the Cerros del Rio Basalt. In addition, contrary to NMED requests, straddle packers will **not** be used to collect vapor samples from targeted discrete intervals to screen for the presence or absence of vapor phase contamination. The NMED requests for the enhanced vadose zone data collection were dismissed



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as outside the scope of the Hydrogeologic Workplan. Budget and time restrictions were also cited as issues.

Upon NMED request, LANL will move R-23 to Pajarito Canyon just west of State Route 4, R-32 will move to Pajarito Canyon upgradient of R-23 and downgradient of R-20 and PM-2. R-20 is located to characterize the affects that pumping of municipal supply well PM-2 has on the regional aquifer. The proposed location for R-21 is Cañada del Buey, between MDAs L and G. NMED asked that R-16 be moved to a location west of State Route 4 north of the channel in Cañada del Buey as this location will be more useful for providing information regarding a required groundwater monitoring network for TA-54. LANL refused to use the location stating that a location at the Overlook Park in White Rock will provide more useful information for plateau wide groundwater modeling purposes.

Due to the proximal location of many of these boreholes to subsurface vapor plumes located a TA-54 and the downgradient location of many of the boreholes relative to current and historic high explosive, perchlorate, chlorinated solvent and other contaminant releases, NMED asked for a more thorough investigation of the vadose zone at the proposed well locations. Once again, LANL deferred the NMED data collection requests to other groups or stated the information is not necessary. Additionally, NMED believes borehole/well locations adjacent to TA-54 would better serve to establish a groundwater monitoring well network specific to the MDAs located on Mesita del Buey.

