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State of New Mexico
ENVIRONMENT DEPARTMENT
Harold Runnels Building
1190 St. Francis Drive, P.O. Drawer 26110
Santa Fe, New Mexico 87502-0110
(505) 827-2855
Fax: (505) 827-2836

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Bento*

MARK E. WEIDLER
SECRETARY

GARY E. JOHNSON
GOVERNOR

November 24, 1997

H. L. Daneman
1304 Calle Ramon
Santa Fe, NM 87501

Subject: October 24, 1997 letter concerning ground water contamination at Los Alamos National Laboratory

Dear Mr. Daneman:

I have been asked to respond to your letter to Governor Gary Johnson regarding radioactive contamination of ground water at Los Alamos National Laboratory (LANL). I regret that you feel that your requests for information have not received adequate responses by the Environment Department. However, I have been informed by my staff that they have provided you information regarding ground water and other concerns at LANL. The kind of information which you are requesting is public, the Department has made no claim of privilege or confidentiality, and we will continue to provide what information we have in response to your requests. To address your concern that there may be dangerous levels of radioactive chemicals in Mortandad Canyon at LANL, I have summarized the salient facts and include contacts within the Department to whom you can direct further inquiries.

As indicated in the attachment to your letter, our data from 1994 for Mortandad Canyon observation well, MCO-5, shows levels of tritium in MCO-5 of 22,137.9 pCi/L, and of strontium-90 of 38.12 pCi/L. For comparison, Safe Drinking Water Act maximum contaminant levels (MCLs) for these constituents in domestic water supply are 20,000 and 8 pCi/L, respectively. Samples taken at MCO-5 in 1996 were not analyzed for tritium or strontium; however, samples collected at nearby MCO-4 were analyzed for tritium and strontium, and showed high levels of both constituents. This data was transmitted to you on July 30, 1997 by the DOE Oversight Bureau.

Data collected by Los Alamos National Laboratory at MCO-5 also continues to show levels of tritium and strontium-90 in excess of MCLs. Data from MCO-5 and other Mortandad Canyon wells is available in the laboratory's Environmental Surveillance Reports.

The Radioactive Liquid Waste Treatment Facility at the laboratory's TA-50 has discharged liquid effluent into Mortandad Canyon since 1963. In 1996, the mean concentration in effluent from TA-50 was 61,700 pCi/L of tritium, and 36.1 pCi/L of strontium-90 (Environmental Surveillance



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and Compliance at Los Alamos in 1996). Clearly this discharge over the years has had an impact on the alluvial ground water in Mortandad Canyon. This discharge is permitted by the U. S. Environmental Protection Agency (Permit Number NM 0028355); however, the permit provides only very limited coverage of radioactive constituents. In addition to this permit, the Ground Water Quality Bureau has recently required the laboratory to prepare a Groundwater Discharge Plan for this facility.

Besides sampling wells in Mortandad canyon to verify the results of samples collected by the laboratory and reported in their environmental surveillance reports, the DOE Oversight Bureau has performed computer modeling of the Mortandad Canyon shallow aquifer in order to better understand the potential fate of the effluents from TA-50. The report *Preliminary Results of Modeling the Shallow Aquifer, Mortandad Canyon, Los Alamos National Laboratory* (Stone, 1995) is available from the Bureau. The modeling, although only preliminary, indicated that downward leakage through the perching layer was occurring.

In conclusion, while there are reasons to be concerned, there is no immediate threat to the public health from the ground-water contamination in Mortandad Canyon. However, it is recognized that more information is needed. LANL is embarking on a comprehensive ground water monitoring program which should fill gaps in our knowledge of the hydrogeology of Mortandad Canyon. In addition, the Environmental Restoration Project at LANL will be conducting comprehensive investigations of critical canyons on the Pajarito Plateau - including Mortandad Canyon. The Environment Department will be following these activities. In the meanwhile, LANL has committed to upgrading their Radioactive Waste Water Treatment Plant at TA-50, with some of the upgrades slated to come on line this winter.

For information regarding environmental monitoring data collected by the DOE Oversight Bureau you should contact John Parker at 827-1541. For more information about the TA-50 Groundwater Discharge Plan, contact Marcy Leavitt of the Ground Water Quality Bureau at 827-2919. For information about the TA-50 discharge you should contact Glenn Saums of the Surface Water Quality Bureau at 827-2827. For information about the hazardous waste management LANL, contact Benito Garcia of the Hazardous and Radioactive Materials Bureau at 827-1557.

Sincerely,



Mark Weidler, Secretary

MEW:JWP/jwp

cc: **Ed Kelley, Director, NMED Water and Waste Management Division**
John Parker, Chief, NMED DOE Oversight Bureau
Benito Garcia, Chief, NMED Hazardous and Radioactive Materials Bureau
Steve Yanicak, Point of Contact, NMED DOE Oversight Bureau
Glenn Saums, Program Manager, NMED Surface Water Quality Bureau
Tom Todd, Manager, DOE-LAAO
Tom Baca, Director, LANL EM Division
Denny Erickson, Director, LANL ES&H Division