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MEMORANDUM

TO: Neil Weber, Chief
Department of Energy Oversight Bureau

FROM: *BJG* Benito J. Garcia, Chief
Hazardous and Radioactive Materials Bureau

DATE: June 27, 1996

SUBJECT: **Technical Area 49 - Los Alamos National Laboratory - Need for Concurrent or Independent Sampling by DOE/OB to Address NMED Concerns**

FILE LANL HSWA 5/11/94/49

The Hazardous and Radioactive Materials Bureau (HRMB) would like to request ground water sampling assistance from the Department of Energy Oversight Bureau (DOE OB) to address specific concerns at Los Alamos National Laboratory (LANL) Technical Area (TA)-49. Various inorganic and organic constituents have been detected during recent environmental surveillance (ES) sampling events within the DT-series test wells at TA-49 (hydronuclear experimental area). HRMB recently communicated to DOE\LANL (see letter to Theodore Taylor (DOE\LANL) from Benito Garcia (HRMB) dated June 10, 1996) that the TA-49 material disposal area (MDA)-AB is considered a high priority site at LANL. The basis for this prioritization was formed in part on the following: the nature and quantity of the hazardous constituents contained within the MDA, the integrity of the units, and ES data which suggests possible releases to the regional aquifer.

Previous organics detection within DT-9 test well are of concern even though UC/DOE believe previous detections to be inconsequential and discounted during an internal QA/QC process. During a 1993 ES sampling event, the following organics were detected within DT-9: 2,4- dinitrophenol (130 ppb), pentochlorophenol (110 ppb), and acetone (46 ppb). Also, within well CH-2, drilled only to 500 foot depth, numerous organic constituents were detected including DNT (35 ppb). The UC/DOE laboratory quality control did not meet EPA criteria and these analyses were invalidated by UC/DOE , although it is unclear which criterion or criteria were not met. The cited test wells have not been sampled for organics since the detection of these hazardous constituents in 1993. The facility and DOE/OB should resample to confirm the presence or absence of organics and at what levels in order to be able to proceed with some assurance of confidence in addressing this site. If UC/DOE does not wish to sample , I suggest some independent DOE/OB sampling and analysis would be within the charter of DOE/OB.

Inorganic constituents have also been detected above levels of concern within these test wells at TA-49. Filtered and unfiltered ground water samples detected lead above EPA MCLs. The lead was believed by LANL to have entered the wells by modifications which were made

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to well pumps in 1992. However, LANL has not ruled out subsurface transport from the hydronuclear experiential area. Zinc and antimony have also been detected at elevated levels within the DT-series wells in recent years. LANL has not addressed the elevated values observed for these inorganics. Additionally, gross alpha and beta values were elevated for DT-9 test well during 1994.

Given the above ground water sampling results, HRMB has recommended that the RCRA Facility Investigation (RFI) at TA-49 be accelerated. HRMB recognizes that the DT-series wells are screened over 200 - 500 foot intervals within the regional aquifer and do not represent optimum monitoring conditions. However, these wells are the only available means of ground water monitoring near these RCRA sites. Given the enormous screened intervals from which these samples were collected, HRMB is very concerned that organics were detected at this site since such great screening intervals would lead one to believe that the organics would be representatively dilute in samples collected. The indication of the organics in the samples leads one to believe that the source term for such organics may be quite large.

HRMB would greatly appreciate assistance from the DOE / OB in investigating the presence of organics and particular inorganics within the DT-series test wells. HRMB would like to schedule ground water sampling as soon as possible. It is HRMB's understanding that UC/DOE ES sampling for the DT-series wells will take place sometime within the next few months. I would like to schedule a meeting with your designee and representatives of my staff at your convenience to discuss the specifics of this request and coordinate the sampling events between NMED staff and UC/ DOE.

Thank you in advance for your assistance in this matter , should you have questions call me at your convenience at 7-1557.

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