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Date: June 15, 2010  
Refer To: ENV-RCRA-10-122

Mr. James Bearzi  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505-6313

Dear Mr. Bearzi:

**SUBJECT: REQUEST FOR "CONTAINED-IN" DETERMINATION FOR DRILL CUTTINGS, AND ASSOCIATED CONTACT WASTE, FROM RE-DRILLING OF REGIONAL WELL R-48**

The purpose of this letter is to request that the NMED Hazardous Waste Bureau use its authority under 20.4.1.200 NMAC §261.3(f) to determine that the drill cuttings, and associated contact waste, generated from the re-drilling of regional well R-48, do not warrant management as F-listed hazardous waste, pursuant to the requirements of 20.4.1.200 NMAC §261.31. If the "contained-in" is approved, LANL proposes to manage the IDW as non-hazardous wastes in accordance with the NMED-approved *NOI Decision Tree for Land Application of IDW Solids from Construction of Wells and Boreholes* (October 2007).

Regional well R-48 was installed in an existing borehole approximately 1800 feet (ft) southeast of well R-25. The scope of the drilling phase at R-48 was to extend an existing borehole (CdV-16-3i) approximately 300 feet to a total depth of 1705 feet. The purpose of R-48 is to enhance the Technical Area 16 (TA-16) monitoring well network by providing a regional aquifer well to the southeast of the 260 Outfall and of building TA-16-340 (Fish Ladder). The approximate volumes of wastes are:

- 9 cubic yards of drill cuttings located in a lined pit
- 30 cubic yards of contact waste (predominantly pit liner)

The drill cuttings have been characterized by direct sampling. Based on analytical results, the cuttings are not characteristic wastes, but do contain low concentrations of methylene chloride. Documentation regarding possible sources of the contamination was reviewed to identify the source(s) of the potentially listed constituent. Based on the document review, high explosives and various types of solvents may have been discharged from building 16-340 (Fish Ladder). According to the 1993 Resource Conservation and Recovery Act Facility Investigation (RFI) Report for Operable Unit 1082, methylene chloride was among the solvents used in Building 16-



340. Methylene chloride was detected in the drill cuttings at well R-48, which is in the proximity of Building 16-340. The documentation did not identify F-listed sources other than spent solvents or any K-, P- or U-listed sources. Therefore, the only hazardous waste numbers that would be assigned to the drill cuttings and associated contact waste would be F001 or F002.

Table 1 compares the detected methylene chloride concentrations with NMED Residential Soil Screening Levels (SSLs) and U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSLs) to determine whether the detected concentrations present a health-based concern for a residential receptor. The methylene chloride is considerably below the SSLs/RSLs and would not pose a concern.

According to EPA documents and associated guidance, the authorized state may also make a determination on a case-specific basis as to how LDRs apply to the waste when a "contained-in" determination has been made. Because the maximum detected concentration of methylene chloride from re-drilling well R-48 is below the LDR treatment standard, as shown in Table 1, LANL also requests a determination from NMED that LDRs will not apply to the drill cuttings and associated contact waste so that the contact waste may be disposed of as nonhazardous waste and the drill cuttings may be land applied in accordance with the NMED-approved NOI Decision Tree, *Land Application of IDW Solids from Construction of Wells and Boreholes*.

LANL believes that a "contained-in" determination for the methylene chloride is appropriate because it would be protective of human health and the environment, and would allow for more cost-effective disposition of the investigation-derived waste from re-drilling of regional well R-48.

If you have questions, please contact Jocelyn Buckley, of my staff, at (505) 665-5209 or Gene Turner at (505) 667-5794.

Sincerely,



Anthony R. Grieggs  
Group Leader  
Water Quality & RCRA (ENV-RCRA) Group

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Cy (continued):

David McInroy, CAP, M992  
Mike Alexander, CAP-FS, K497  
CAP Project File, M992  
ENV-RCRA File, K490  
IRM-RMMSO, A150

**Table 1.** Comparison of Potential F-Listed Organic Constituents Detected in the R-48 Drill Cuttings to Soil Screening Levels and Land Disposal Restriction Treatment Standards

<b>Contaminant</b>	<b>Maximum Concentration (mg/kg)</b>	<b>NMED Residential SSL (mg/kg)<sup>1</sup></b>	<b>EPA RSL (mg/kg)<sup>2</sup></b>	<b>LDR Treatment Standard (mg/kg)<sup>3</sup></b>
Methylene Chloride	0.0084	199	110	30

mg/kg = milligrams per kilogram

NMED = New Mexico Environment Department

EPA = Environmental Protection Agency

SSL = Soil Screening Level

RSL = Regional Screening Level

LDR = Land Disposal Restrictions

1 – From “Technical Background Document for Development of Soil Screening Level” Revision 5.0 2009

2 – From “Regional Screening Levels Summary Table,” May 2010 ([http://www.epa.gov/reg3hwmd/risk/human/rb-concentration\\_table/Generic\\_Tables/pdf/master\\_sl\\_table\\_run\\_MAY2010.pdf](http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/pdf/master_sl_table_run_MAY2010.pdf))

3 – LDR Treatment Standards for Hazardous Wastes, Non-wastewaters, as provided in 40 CFR 268.40 and adopted by 20.4.1.800 NMAC