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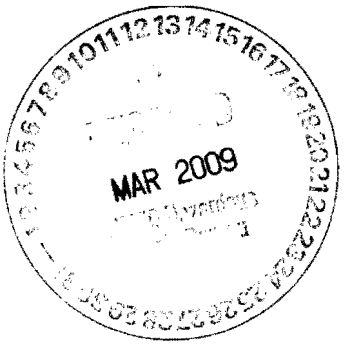

Los Alamos
NATIONAL LABORATORY
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Environmental Protection Division
Water Quality & RCRA Group (ENV-RCRA)
P.O. Box 1663, Mail Stop, K490
Los Alamos, New Mexico 87545
(505) 667-0666/FAX: (505) 667-5224

Date: March 9, 2009
Refer To: ENV-RCRA-09-044

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 THE RE-DRILLING OF REGIONAL WELL R-40

The initial drilling of regional well R-40 used dry air rotary methods. The Los Alamos National Laboratory (LANL) requested a "contained-in" approval for the drill cuttings and associated contact waste generated during air rotary drilling in a letter dated September 24, 2008, from Anthony R. Grieggs, LANL, to James Bearzi, New Mexico Environment Department (NMED). NMED approved the "contained-in" determination in a letter dated October 29, 2008, from James Bearzi, NMED, to David Gregory, Los Alamos Site Office of the Department of Energy, and David McInroy, LANL. The original well collapsed and could not be maintained with dry drilling. Therefore, a new well was re-drilled immediately adjacent to the original well site using liquids to assist in keeping the hole open. 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-40 do not warrant management as F-listed hazardous waste, pursuant to the requirements of 20.4.1.200 NMAC §261.31. 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-40 is located south-southeast of MDA-H in Pajarito Canyon and was drilled to provide downgradient monitoring for potential releases from MDA-H. The approximate volumes of wastes are:

- 98 cubic yards of drill cuttings located in a lined pit
- 10 gallons of contact waste stored in a 55-gallon drum

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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 1,2-dichlorobenzene. Documentation regarding possible sources of the contamination was reviewed to identify the source of the F-listed contaminant. Based on the document review, F-listed spent solvents were discharged at TA-18, which is in the proximity of the drill site. There is a potential that the drill cuttings were contaminated by F-listed sources. The documentation did not identify disposal or spills of P- or U-listed wastes or any K-listed processes; therefore, only F-listed contaminants are covered under this "contained-in" request.

As required by the *NOI Decision Tree for Land Application of IDW Solids from Construction of Wells and Boreholes*, LANL compared the maximum detected concentrations of F-listed contaminants in the drill cuttings to:

- NMED Residential Soil Screen Levels (SSLs)
- EPA Region 6 Residential Medium-Specific Screen Levels (MSSLs)
- EPA Land Disposal Restriction (LDR) Treatment Standards

The comparisons are shown in Table 1. The maximum concentration is less than these limits; therefore, the drill cuttings meet the criteria for requesting a "contained-in" determination in accordance with the NOI Decision Tree. If the "contained-in" is approved, LANL proposes to manage the drill cuttings as non-hazardous waste in accordance with the NMED-approved *NOI Decision Tree for Land Application of IDW Solids from Construction of Wells and Boreholes,* and to dispose of the contact waste as nonhazardous waste based upon the analytical results from the drill cuttings.

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 1,2-dichlorobenzene shown in Table 1 is below its respective LDR treatment standards in 40 CFR §268.40, management and disposal of the drill cuttings, and associated contact waste, as nonhazardous is appropriate.

LANL believes that a "contained-in" determination for the organic constituent shown in Table1 is appropriate. Management as non-hazardous waste in accordance with the NMED-approved *NOI Decision Tree for Land Application of IDW Solids from Construction of Wells and Boreholes* (October 2007) would be protective of human health and the environment and would allow for a more cost-effective disposition of the investigation-derived waste from re-drilling of regional well R-40.

Table 1. Comparison of Potential F-Listed Organic Constituents Detected in the Drill Cuttings from the re-drilling of R-40 to Soil Screening Levels and Land Disposal Restriction Treatment Standards

Contaminant	Sample No.	Maximum Concentration (mg/kg)	NMED Residential SSL (mg/kg)[1]	EPA Region 6 Residential MSSL (mg/kg)[2]	LDR Treatment Standard (mg/kg)[3]
1,2 dichlorobenzene	GW37-09-1545	0.336E-03	37.4	280	6.0

mg/kg = milligrams per kilogram
EPA = Environmental Protection Agency
MSSL = Medium Specific Screening Level
NMED = New Mexico Environment Department§
LDR = Land Disposal Restrictions
SSL= Soil Screening Level
1 – From "Technical Background Document for Development of Soil Screening Level" Revision 4.0 June 2006, New Mexico Environment Department
2 – From "EPA Region 6 Human Health Medium-Specific Screening Levels", February 2007, US Environmental Protection Agency
3 – LDR Treatment Standards for Hazardous Wastes, Nonwastewaters, as provided in 40 CFR 268.40 and adopted by 20.4.1.800 NMAC

If you have any questions, please contact Anthony R. Grieggs at (505) 667-0666 or Gene Turner at (505) 667-5794.

Sincerely,

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

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LWSP Project File, M992
ENV-DO, file, J978
ENV-RCRA, File, K490
IRM-RMMSO, A150