TA16

ENTERED

Los Alamos
NATIONAL LABORATORY
EST. 1943

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

Date: May 26, 2010
Refer To: ENV-RCRA-10-102

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 CONSOLIDATED UNIT 16-003(d)-99 INVESTIGATION

The purpose of this letter is to request that the New Mexico Environment Department (NMED) Hazardous Waste Bureau use its authority under 20.4.1.200 NMAC 261.3(f) to determine that drill cuttings and associated contact waste generated during the investigation of the Los Alamos National Laboratory (LANL) consolidated unit 16-003(d)-99 do not warrant management as F-listed hazardous waste, pursuant to the requirements of 20.4.1.200 NMAC 261.31. Consolidated unit 16-003(d)-99 consists of Solid Waste Management Units (SWMUs) 16-001(e), dry well, and 16-003(d-g), eight HE sumps. These SWMUs are located along the 300 Line, which includes process Buildings 16-300, -301, -302, -304, -305, -306, and -307. The 300 Line was built in late 1951 for casting explosives. Buildings were converted to other uses when casting explosives were replaced by plastic bonded explosives. The work conducted in this area supported weapons research and included mock explosives preparation, explosives casting, filament winding, and plastics and plastics component development.

The approximate volumes of wastes are:

- drill cutting (less than 2 cubic yards)
- contact waste (less than 30 gallons)

The two waste streams are being managed in 55-gallon drums as hazardous waste in a less-than-90-day accumulation area at the investigation site pending this "contained-in" determination. Waste characterization is based on samples that were collected directly from the drums containing the drill cuttings. Based on analytical results for the cuttings, the waste is not characteristic, but it contains low concentrations of potentially listed contaminants.

33644

Documentation was reviewed to identify the sources of the potentially listed contaminants. Based on the document review, various types of solvents may have been discharged to this consolidated unit. According to the 1993 Resource Conservation and Recovery Act Facility Investigation (RFI) Work Plan for Operable Unit 1082, the types of solvents used at the 300s line included acetone, 1,1,1-trichloroethane, chlorothene, methylene chloride, methyl ethyl ketone [2-butanone], and trichlorotrifluoroethane (Freon PCA). Of these solvents, only methylene chloride and 1,1,1-trichloroethane were detected in the drill cuttings. 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 and/or F002. Table 1 compares the detected methylene chloride and 1,1,1-trichloroethane concentrations with NMED Residential Soil Screening Levels (SSLs) and the 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 contaminants in the drill cuttings are 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 the Land Disposal Restrictions (LDRs) apply to the waste when a "contained-in" determination has been made. Because the maximum detected concentrations of listed contaminants from the investigation of consolidated unit 16-003(d)-99 are below the LDR treatment standards, 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 contamianants shown in Table 1 is appropriate because it would be protective of human health and the environment, and would allow for cost-effective disposition of the investigation-derived waste from consolidated unit 16-003(d)-99.

Please contact Ann Sherrard at (505) 665-8968 of the Water Quality & RCRA Group (ENV-RCRA) if you have questions.

Sincerely,

A R Grieggs

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

Cy: Katie Roberts, NMED/HWB, Santa Fe, NM
Neelam Dhawan, NMED/HWB, Santa Fe, NM
David Cobrain, NMED/HWB, Santa Fe, NM
Gene Turner, LASO-EO, A316

Cy (continued):
Cheryl Rodriguez, LASO-EO, A316
Michael B. Mallory, PADOPS, A102
J. Chris Cantwell, ADESHQ, K491
Ann Sherrard, ENV-RCRA, K490
Jocelyn Buckley, ENV-RCRA, K490
John McCann, PMFS-DO, M992
David McInroy, CAP, M992
EP-CAP Project File, M992
ENV-RCRA File, K490
IRM-RMMSO, A150

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

Constituent	Maximum Concentration (mg/kg)	NMED Residential SSL (mg/kg)[1]	EPA RSL (mg/kg)[2]	LDR Treatment Standard (mg/kg)[3]
Methylene chloride	0.01	199	110	30
Trichloroethane [1,1,1-]	0.082	21800	8700	6.0

mg/kg = milligrams per kilogram
EPA = Environmental Protection Agency
RSL = Regional Screening Level
NMED = New Mexico Environment Department§
LDR = Land Disposal Restrictions
SSL= Soil Screening Level
1 – From "NMED Technical Background Document for Development of Soil Screening Level" Revision 5. 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)
3 – LDR Treatment Standards for Hazardous Wastes, Nonwastewaters, as provided in 40 CFR 268.40 and adopted by 20.4.1.800 NMAC