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Los Alamos
NATIONAL LABORATORY
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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: October 7, 2010
Refer To: ENV-RCRA-10-189

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 DECONTAMINATION FLUIDS AND ASSOCIATED CONTACT WASTE FROM THE DRILLING OF INTERMEDIATE WELL CdV-16-4ip

The Laboratory is requesting NMED Hazardous Waste Bureau use its authority under 20.4.1.200 NMAC §261.3(f) to determine that the decontamination fluids and associated contact waste generated from the drilling of intermediate well CdV-16-4ip, do not warrant management as F-listed hazardous waste, pursuant to the requirements of 20.4.1.200 NMAC §261.31 as long as contaminants are below the limits in the NMED-approved NOI Decision Tree for Land Application of *Drilling, Development, Rehabilitation and Sampling Purge Water Decision Tree – Revised* (March 2010).

Perched-intermediate pumping well CdV-16-4ip was installed as part of a hydrologic testing program to evaluate the properties of the deep-perched groundwater zone at Consolidated Unit 16-021(c)-99 (260 Outfall), located in Technical Area 16 (TA-16) in the southwest corner of Los Alamos National Laboratory. The "p" in the well name indicates this well is designed for pump testing. The tests will provide field-scale measurements of aquifer parameters for the deep-perched system that will be used to assess the potential for pumping and treatment of contaminated deep-perched groundwater associated with the 260 Outfall. The well is located east of the main cluster of observation wells that include multiple well screens at R-25 and single well screens at R-25b, R-25c, and CdV-16-1(i). Approximately 420 gallons of decontamination fluids were generated during the drilling of intermediate well CdV-16-4ip.

The decontamination fluids have been characterized by direct sampling. Based on analytical results, the fluids are not characteristic wastes, but do contain low concentrations of butanone [2-]. Documentation regarding possible sources of the contamination was reviewed to identify the source(s) of the potentially listed constituent. Based on document review and interviews with workers, a variety of F-listed solvents (including butanone [2-]) were discharged to the TA-16-260

outfall from cleaning operations at TA-16-260. 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 decontamination fluids and associated contact waste would be F005. Table 1 compares the detected butanone [2-] concentration to groundwater standards in accordance with Section VIII.A.1 of the Compliance Order on Consent:

- If both a Water Quality Control Commission (WQCC) groundwater standard (20.6.2.3.3103 NMAC) and an EPA Safe Drinking Water Act Maximum Contaminant Levels (MCL) (40 Code of Federal Regulations [CFR] §141.61) have been established for an individual substance, then the lower of the two standards is used.

- If a WQCC standard and/or MCL are not available for a contaminant, EPA tap water standards are used (40 CFR §268.40).

The maximum contaminant concentration of the F-listed constituent is less than these limits and, therefore, the decontamination fluids meet the criteria for requesting a "contained in" determination. If the contained in is approved, LANL proposes to dispose of the decontamination fluids and associated contact waste as non-hazardous, as long as these standards are met.

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 concentrations of butanone [2-] in the decontamination fluids from well CdV-16-4ip is below the LDR treatment standard, as shown in Table 1, LANL also requests a determination from NMED that LDRs will not apply to waste from CdV-16-4ip so that the decontamination fluids and associated contact waste may be disposed of as nonhazardous waste.

LANL believes that a "contained-in" determination for the butanone [2-] is appropriate because it would be protective of human health and the environment, and would allow for more cost-effective disposition of the decontamination fluids and associated contact waste generated during drilling of intermediate well CdV-16-4ip.

If you have questions, please contact Mark Haagenstad, of the WQ & RCRA Group at (505) 665-2014 or Gene Turner at (505) 667-5794.

Sincerely,

Dolores Sandoval DGL

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

ARG:JG/lm

Cy: David Cobrain, NMED/HWB, Santa Fe, NM
Gene Turner, LASO-EO, A316
Cheryl Rodriguez, LASO-EO, A316
Michael B. Mallory, PADOPS, A102
J. Chris Cantwell, ADESHQ, K491
Denny Hjeresen, ENV-DO, (E-File)
Mark Haagenstad, ENV-RCRA, (E-File)
Jocelyn Buckley, ENV-RCRA, (E-File)
Jennifer Griffin, ENV-RCRA, (E-File)
David McInroy, EP-CAP, M992
Mike Alexander, CAP-FS, M992
CAP Project File, M992
ENV-RCRA File, K490
IRM-RMMSO, A150

Table 1. Comparison of Potential F-Listed Organic Constituents Detected in the CdV-16-4ip Decontamination Fluids to WQCC, MCLs, and Land Disposal Restriction Treatment Standards

Contaminant	Media	Maximum Concentration (ug/L)[1]	WQCC (ug/L) or MCLs(ug/L) Standards[2]	LDR Treatment Standard (ug/L)
Butanone [2-]	Liquid/Drilling Fluids	1.49	No Standard	280

[1] Significant figures vary but are shown as they appear in the Water Quality Database

[2] Note that EPA tap water standards were not available for any contaminants without 3101 standards and/or SDWA MCLs; therefore, EPA tap water standards were not used.