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NEW MEXICO ENVIRONMENT
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Environmental Protection Division
Water Quality & RCRA (ENV-RCRA)
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Date: April 7, 2011
Refer To: ENV-RCRA-11-0064
LAUR: 11-02125

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 DRILLING FLUIDS, DEVELOPMENT WATER, AND ASSOCIATED CONTACT WASTE FROM REGIONAL WELL R-63

The Los Alamos National Laboratory (LANL) is requesting the New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB) use its authority under 20.4.1.200 NMAC §261.3(f) to determine that the drilling fluids, development water and associated contact waste generated at regional well R-63, do not warrant management as F-listed hazardous waste, pursuant to the requirements of 20.4.1.200 NMAC §261.31. Regional well R-63 was installed pursuant to a requirement of NMED to replace well screen 5 (at the regional water table) for the existing well R-25. The primary purpose of the well is to provide groundwater monitoring for high explosives (HE) in the regional aquifer down gradient of Consolidated Unit 16-021-(c)-99 (260 Outfall).

The drilling fluids and development water will be characterized by direct sampling. Based on the analytical results from the development water, the waste is not a characteristic waste, but does contain low concentrations of toluene. Documentation regarding possible sources of toluene was reviewed to identify the source(s) of the potentially listed constituent. Based on document review and interviews with workers, a variety of solvents (i.e., toluene) were discharged to the TA-16-260 outfall from cleaning operations at TA-16-260. Because these solvents were used for their solvent properties and discharged through the outfall as waste the drilling fluids and development water are presumed to be F-listed. 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 number that applicable to the drilling fluids, development water, and associated contact waste would be F005. Table 1 compares the detected toluene 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 toluene concentration is less than these limits and, therefore, meets the criteria for requesting a “contained in” determination. The analytical results for the drilling fluids, when available, will also be compared to these limits to ensure that it also meets the criteria for a “contained in” determination. If the contained in is approved, LANL proposes to dispose of the drilling fluids, development water and associated contact waste from R-63 as non-hazardous, as long as these standards are met.

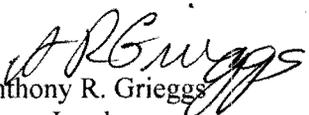
According to EPA documents and associated guidance, the authorized state may also make a determination on a case-specific basis as to how LDRs apply to the waste when a “contained-in” determination has been made. Because the maximum detected concentration is below the LDR treatment standard, as shown in Table 1, LANL also requests a determination from NMED that LDRs do not apply to waste from R-63 so that the contact waste may be disposed of as nonhazardous waste and the drilling fluids and development water may be land applied in accordance with the NMED-approved *Los Alamos National Laboratory Drilling, Development, Rehabilitation and Sampling Purge Water Decision Tree – Revised* (March 2010).

If the analytical results for the drilling fluids indicate that the potential F-listed organic compound identified in this letter is detected at a concentration above the screening standards identified in Table 1, the media will be managed as hazardous waste. Additionally, if more potential listed hazardous waste constituents (other than toluene) are detected, an addendum to this “contained in” request will be submitted to the NMED for approval.

LANL believes that a “contained-in” determination for toluene is appropriate because it would be protective of human health and the environment, and would allow for more cost-effective disposition of the drilling fluids, development water, and associated contact waste generated at regional well R-63.

Please contact Mark Haagenstad at (505) 665-2014 of the Water Quality & RCRA Group (ENV-RCRA) or Gene Turner of LASO-EO at (505) 667-5794 if you have questions.

Sincerely,


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

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CAP Project File, M992
ENV-RCRA File, K490
IRM-RMMSO, A150

Table 1. Comparison of Potential F-Listed Organic Constituents Detected in the R-63 Development Water Samples to WQCC, MCLs, and Land Disposal Restriction Treatment Standards

Contaminant	Media	Date	Sample ID	Maximum Concentration (ug/L)¹	WQCC (ug/L) Standards²	MCLs (ug/L) Standards³	LDR Treatment Standard (ug/L)
Toluene [F005]	R-63 Development Water	2/14/11	WST63-11-4203	0.62 J	750	1000	80

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

² Human Health Standards as listed in NMAC 20.6.2.3103 issued by NM WQCC.

³ EPA National Primary Drinking Water Standards Maximum Contaminated Levels (MCLs) as found in 40 CFR 141.61.