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Date: May 4, 2009
Refer To: ENV-RCRA-09-077

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 SPRING AND ALLUVIAL WATERS TO EXPEDITE THE CORRECTIVE MEASURES IMPLEMENTATION PLAN FOR CONSOLIDATED UNIT 16-021(c)-99

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 New Mexico Administrative Code (NMAC) 261.3(f) and the Environmental Protection Agency's (EPA's) "contained-in" policy to determine that spring and alluvial waters in the Cañon de Valle drainage that are potentially contaminated by listed contaminants and residues from treatment of these waters do not warrant management as F-listed hazardous waste, pursuant to the requirements of 20.4.1.200 NMAC §261.31. The Technical Area 16 building 260 (TA-16-260) outfall is believed to be the major source of contaminants in the Cañon de Valle drainage. Based on document review and interviews with workers, a variety of F-listed solvents were discharged to the outfall from cleaning operations at TA-16-260. However, the documentation and interviews did not identify contamination from disposal or spills of P- or U-listed materials or releases from K-listed processes; therefore, these waste numbers would not be assigned to the alluvial and spring waters.

Without NMED's approval of this "contained-in" request, the waters would contain F-listed wastes and a Resource Conservation and Recovery Act (RCRA) permit may be required for the following treatment operations proposed in the NMED-approved Corrective Measures Implementation Plan for Consolidated Unit 16-021(c)-99, Revision 1 (July 2007):



- installing a permeable reactive barrier (PRB) for treatment of high explosives and barium in Cañon de Valle;
- installing carbon filters at Burning Ground Spring and Sanitary Wastewater Systems Consolidation (SWSC) Spring to treat high explosives, and
- modifying the existing carbon filter at Martin Spring to collect water from a new seep.

As discussed with Michael Dale of your staff during a December 22, 2008 meeting, the levels of contaminants in the waters to be treated are so low that a “contained-in” determination is appropriate. Therefore, a RCRA permit would not be necessary and implementation of these treatment technologies would not be delayed by permitting. To support this “contained-in” request, Table 1 compares the maximum detected concentrations of contaminants in the alluvial wells in the vicinity of the project and the springs with groundwater standards. The contaminants included in the table are those that could cause the waters to be F-listed. The comparison to groundwater standards was made 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).

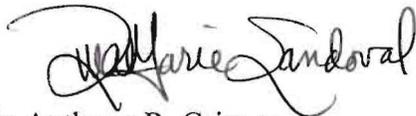
Carbon tetrachloride (7 micrograms per liter [$\mu\text{g/L}$]) at Martin Spring is the only contaminant that exceeded a WQCC/MCL standard (5.0 $\mu\text{g/L}$). Carbon tetrachloride was detected only once (7 $\mu\text{g/L}$ in July 1997) in 44 samples taken between 1995 and 2008. It has not been detected in the 40 samples collected since July 1997. Therefore, current levels of carbon tetrachloride meet applicable standards.

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. Table 1 compares the maximum detected concentrations of F-listed contaminants with the LDR Treatment Standards (40 CFR §268.40, incorporated into 20.4.800 NMAC). Because all of the maximum detected concentrations are below the LDR treatment standards, LANL also requests a determination from NMED that LDR treatment standards will not apply to untreated or treated waters or the residues from treatment.

LANL believes that a “contained-in” determination for the organic constituents shown in Table 1 is appropriate because it would be protective of human health and the environment and would expedite treatment of spring and alluvial waters in Cañon de Valle.

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

Sincerely,



DGL

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

ARG:AS/lm

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EP-CAP Project File, M992
ENV-DO, file, w/o enc., J978
ENV-RCRA, File, w/enc., K490
IRM-RMMSO, w/enc., A150

Table 1. Comparison of Maximum Detections of F-Listed Contaminants to Water Quality Standards and Land Disposal Restrictions

| Contaminant | Maximum Concentration (µg/L) ¹ | WQCC (µg/L) or MCLs (µg/L) Standards ² | LDR Treatment Standards (µg/L) |
|---|---|---|--------------------------------|
| Burning Ground Spring | | | |
| Benzene | 0.45 | 5.0 | 14 |
| Butanone[2-] | 8.1 | No Standard | 280 |
| Methylene Chloride | 0.44 | 5.0 | 89 |
| Tetrachloroethene | 3.9 | 5.0 | 56 |
| Trichloroethane[1,1,1-] | 0.28 | 60 | 54 |
| Trichloroethene | 3.7 | 5.0 | 54 |
| Trichlorofluoromethane | 1 | No Standard | 20 |
| Martin Spring | | | |
| Butanone[2-] | 2.3 | No Standard | 280 |
| Carbon Disulfide | 1.33 | No Standard | 3800 |
| Carbon Tetrachloride | 7 | 5.0 | 57 |
| Methylene Chloride | 3.12 | 5.0 | 89 |
| Tetrachloroethene | 0.62 | 5.0 | 56 |
| Trichloro-1,2,2-trifluoroethane[1,1,2-] | 2 | No Standard | 57 |
| Trichloroethene | 0.9 | 5.0 | 54 |
| SWSC Spring | | | |
| Butanone[2-] | 3.1 | No Standard | 280 |
| Methylene Chloride | 0.41 | 5.0 | 89 |
| Tetrachloroethene | 3 | 5.0 | 56 |
| Toluene | 0.55 | 750 | 800 |
| Trichloroethene | 2.4 | 5.0 | 54 |
| Alluvial Well CDV-16-02656 | | | |
| Toluene | 3.68 | 750 | 800 |
| Trichloroethene | 1.1 | 5.0 | 54 |
| Alluvial Well CDV-16-02657 | | | |
| Carbon Disulfide | 1.6 | No Standard | 3800 |
| Alluvial Well CDV-16-02658 | | | |
| Tetrachloroethene | 2.6 | 5.0 | 56 |
| Toluene | 6.7 | 750 | 800 |
| Trichloroethene | 2.86 | 5.0 | 54 |
| Alluvial Well CDV-16-02659 | | | |
| Methylene Chloride | 0.27 | 5.0 | 89 |
| Toluene | 0.454 | 750 | 800 |

µg/L = micrograms per liter

EPA = Environmental Protection Agency

LDR = Land Disposal Restrictions Treatment Standards for Hazardous Wastes, Wastewater

MCLs = Maximum Contaminant Levels

WQCC = Water Quality Control Commission

¹ Significant figures vary but are shown as they appear in the Waster 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.