



TA-03



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Date: June 8, 2004
Refer To: ER2004-0311

Mr. John Kieling, Program Manager
Permits Management Program
NMED – Hazardous Waste Bureau
2905 Rodeo Park Drive East
Building 1
Santa Fe, NM 87505-6303



SUBJECT: NOTIFICATION FOR A NEWLY-IDENTIFIED SOLID WASTE MANAGEMENT UNIT (SWMU) AT TECHNICAL AREA (TA)-3

Dear Mr. Kieling:

The purpose of this letter is to notify the Hazardous Waste Bureau (HWB) of a newly-identified SWMU at Los Alamos National Laboratory (LANL) TA-3. This notification is being submitted in accordance with Module VIII of the Laboratory's Hazardous Waste Facility Permit (Module VIII), Section G.1. The Laboratory's Risk Reduction and Environmental Stewardship – Remediation Services (RRES–RS) Project determined that this site constituted a new SWMU on May 27, 2004. This site has been given the unique SWMU number 03-013(i). Additional information describing this SWMU and the Laboratory's proposed schedule for corrective actions are provided in the following paragraphs.

Site Description and History

SWMU 03-013(i) consists of soil contamination resulting from operational releases of hydraulic oil associated with an inactive facility formerly used for tensile testing of wire-rope assemblies. This facility consisted of two structures, TA-03-246 and TA-03-247. TA-03-246 is a small (approximately 8 ft by 8 ft) corrugated metal building constructed on a concrete slab. This building houses an inactive hydraulic oil compressor and a hydraulic oil tank having a capacity of approximately 100 gallons. TA-03-247 is a corrugated metal building, approximately 15 ft by 25 ft, constructed on a concrete curb surrounding a gravel floor. This building houses a hydraulic ram assembly used for the tensile tests. To perform the tests, one end of the wire-rope assembly would be anchored away from the facility and the other end would be attached to the hydraulic ram assembly. The hydraulic rams are connected to the hydraulic compressor via underground piping between the two buildings. The oil currently in the tank in TA-03-246 has been determined to be free of PCBs, as evidenced by a "PCB Free" label attached to the tank.



The exact dates of operation of the facility are not known. Based on available records, TA-03-246 and TA-03-247 were both constructed prior to 1967. Operation ceased in the mid-1980s when a replacement facility was constructed on Sigma Mesa at TA-60.

Buildings TA-03-246 and TA-03-247 are scheduled for decontamination and decommissioning (D&D) during the summer of 2004.

Nature and Extent of Release

The soil contamination identified at SWMU 03-013(i) consists of contamination around TA-03-246 and inside TA-03-247. At TA-03-246, hydraulic oil appears to have been released to the concrete slab floor inside the building and subsequently flowed between the slab floor and the bottom of the building walls and onto the soil surrounding the building. Visible soil contamination exists along the north side of the building and along the northeast and northwest corners. Soil contamination does not appear to extend more than 1 ft from the building and the total area of contaminated soil appears to be less than 10 sq. ft. The gravel floor inside TA-03-247 is visibly stained with oil in several locations beneath the hydraulic ram assembly. The total area of stained gravel appears to be less than 10 sq. ft.

Release of hydraulic oil from the buried piping between TA-03-246 and TA-03-247 may also have occurred, though underground portions of the piping could not be inspected.

Based on the operational history of the site, the material released at the site is believed to consist only of hydraulic oil. To verify the nature of the released material, RRES-RS requested the RRES Solid Waste Regulatory Compliance (SWRC) Group to collect two samples of oil-contaminated soil around TA-03-246 and submit these for expedited analysis of PCBs, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and total metals. One of the two samples was also submitted for analysis of total petroleum hydrocarbons – diesel range organics (TPH-DRO); TPH – gasoline range organics (GRO); benzene, toluene, ethyl benzene, and xylenes (BTEX); and toxicity characteristic leaching procedure (TCLP) metals, VOCs, and SVOCs. Sample locations were biased to areas of maximum contamination, based on visual appearance.

Four metals (cadmium, copper, lead, and zinc) were detected above background values for Laboratory soils, but below NMED residential soil screening levels (SSLs). TPH-DRO was detected at 3,600 mg/kg and TPH-GRO at 6.2 mg/kg. No PCBs, VOCs, SVOCs, or BTEX compounds were detected. The only analytes detected in the TCLP leachate were barium, cadmium, and lead and all were below regulatory limits. All analytes above detection limits are shown in the following table.

Constituent	Location 1	Location 1 Duplicate	Location 2	Background	SSL
Aluminum, mg/kg	6,720	8,360	6,170	29,200	74,000
Barium, mg/kg	39.7	36.9	48.0	295	5,200
Cadmium, mg/kg	2.29	3.16	4.27	0.4	70
Calcium, mg/kg	1,320	1,010	2,310	6,120	NA ⁽¹⁾
Chromium, mg/kg	8.1	6.0	15.8	19.3	230 ⁽²⁾

Constituent	Location 1	Location 1 Duplicate	Location 2	Background	SSL
Cobalt, mg/kg	ND ⁽³⁾	ND	2.2	8.6	4,500
Copper, mg/kg	20.1	12.1	38.8	14.7	2,800
Iron, mg/kg	8,270	10,300	16,200	21,500	23,000
Lead, mg/kg	72.9	58.1	109	22.3	400
Magnesium, mg/kg	983	934	960	4,610	NA
Manganese, mg/kg	87.2	79.4	119	671	7,800
Nickel, mg/kg	5.5	4.0	15.1	15.4	1,500
Potassium, mg/kg	851	663	658	3,460	NA
Silicon, mg/kg	564	592	390	NA	NA
Sodium, mg/kg	153	124	140	915	NA
Vanadium, mg/kg	7.54	6.99	8.98	39.6	530
Zinc, mg/kg	714	415	1,420	48.8	23,000
TPH-DRO, mg/kg	3,600	NS ⁽⁴⁾	NS	N/A ⁽⁵⁾	NA
TPH-GRO, mg/kg	6.2	NS	NS	N/A	NA
TCLP Barium, mg/L	0.2	NS	NS	N/A	N/A
TCLP Cadmium, mg/L	0.036	NS	NS	N/A	N/A
TCLP Lead, mg/L	0.17	NS	NS	N/A	N/A

Notes:

- (1) NA – Not available.
- (2) SSL for chromium is for hexavalent chromium.
- (3) ND – Not detected.
- (4) NS – Not sampled.
- (5) N/A – Not applicable.

Proposed Schedule for Corrective Actions

Based on the nature of the material released and the results of the sampling described above, the Laboratory does not believe there has been a release of hazardous waste or hazardous constituents at this site and corrective actions under Section D of Module VIII are not necessary. The Laboratory intends to remove all residual oil-contaminated soil and structures at SWMU 03-013(i) as part of the D&D activities scheduled for Buildings TA-03-246 and TA-03-247 during the summer of 2004. At present, the Laboratory expects that the scope of these activities will include:

- Removal of the TA-03-246 floor slab;
- Removal of oil-contaminated soil surrounding TA-03-246;
- Removal of oil-contaminated soil, if any, beneath the TA-03-246 floor slab;
- Removal of the buried pipelines between TA-03-246 and TA-03-247;
- Removal of oil-contaminated soil, if any, surrounding or beneath the buried pipelines;
- Removal of oil-contaminated gravel and underlying soil from TA-03-247; and
- Collection of confirmatory samples from areas where oil-contaminated soil or gravel was removed.

Mr. John Kieling
ER2004-0311

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June 8, 2004

The Laboratory will notify HWB at least 20 days prior to the start of D&D and will submit the results of confirmatory samples to HWB.

If you have any question please contact Joe English at (505) 667-9641.

Sincerely,



David McInroy, Deputy Project Director
Remediation Services
Los Alamos National Laboratory

Sincerely,



David Gregory, Federal Project Director
Department of Energy
Los Alamos Site Operations

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