Department of Energy
Albuquerque Operations Office
Los Alamos Area Office
Los Alamos, New Mexico 87544

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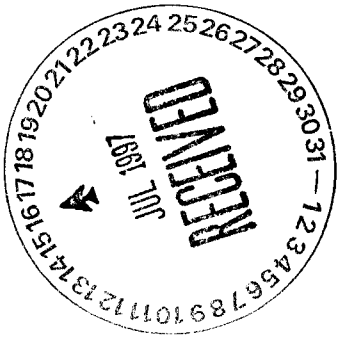
CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Robert S. (Stu) Dinwiddie, Ph.D,
Manager, RCRA Permits Management Program
Hazardous and Radioactive Materials
Bureau
New Mexico Environment Department
2044 Galisteo St., Bldg. A
P. O. Box 26110
Santa Fe, New Mexico 87505



Dear Dr. Dinwiddie:

Subject: Los Alamos National Laboratory's (LANL) Technical Area (TA) 54, Material Disposal Area J Disposal of Hazardous Waste

The purpose of this letter is to address the New Mexico Environment Department Hazardous and Radioactive Materials Bureau (NMED/HRMB) concern regarding the possibility of hazardous waste being disposed of at the TA-54 Material Disposal Area J (MDA J) landfill. During our monthly meeting on May 10, 1997, you stated that NMED/HRMB had reviewed a copy of the TA-54 MDA J Waste Inventory Database submitted March 31, 1995 (Tony Grieggs, LANL, to Coby Muckelroy and Charles Hules, NMED). You indicated that this raised concerns of improper waste disposal. You specifically discussed concerns that the database field descriptions indicate the possibility of hazardous waste being disposed at TA-54, MDA J.

Personnel from LANL Environmental Management Solid Waste Operations (EM-SWO) have researched the MDA J inventory database and investigated any records which had an indication of hazardous waste being disposed at MDA J. Waste Disposal Records (WDR) for questionable items were reviewed and no indication of hazardous waste disposal into MDA J was found.

Specifically, barium constituents and hazardous solvents listed in the Area J Waste Inventory Database were two items of concern mentioned by the NMED/HRMB. Database records indicating barium constituents describe sand used as a buffer for high explosive operations at LANL. Containers containing the contaminated barium sand were all treated well below barium TCLP limits as required by the New Mexico

Administrative Code, Title 20, Chapter 4, Part 1 (20 NMAC 4.1), Subpart II, 261.24, "Toxicity Characteristic," prior to disposal into MDA J.

Solvents that were shown on database records were found to be empty containers that previously contained listed Resource Conservation and Recovery Act (RCRA) solvents. The solvents were repackaged and handled as hazardous waste by EM-SWO personnel. The containers were considered empty as defined by 40 CFR §261.7(b), "Residues of Hazardous Waste in Empty Containers" and are allowed to be managed as a nonhazardous solid waste.

Below is a short description which addresses specifics involved in the treatment of barium contaminated sand and procedures for emptying containers prior to disposal at MDA J.

Barium Sand Treatment

Sand is used as a buffer during the detonation of high explosive material at LANL. Sand containing extractable barium in a concentration of 100 milligrams per liter (mg/l) or greater is regulated by the U. S. Environmental Protection Agency (EPA) as a hazardous waste and must be treated prior to disposal in a landfill (20 NMAC 4.1, Subpart II, 261.24, "Toxicity Characteristic"). The contaminated sand is sent to TA-54 Material Disposal Area L (MDA L) for treatment. The treatment process implemented for the barium contaminated sand involves converting soluble barium compounds to insoluble barium sulfate (a non-toxic mineral) through a reaction between the soluble barium compounds and calcium sulfate. Barium-contaminated sands are sampled prior to and after treatment in order to determine if TCLP standards for barium are met for proper disposal into MDA J. After the contaminated sand has been chemically stabilized, the sand is placed in 55-gallon containers and gypsum cement is added so that the sand-cement mixture will fully harden. After the hardening process is complete, the drums are labeled with a container number and a "non-regulated" marking. Once a Waste Profile Form (WPF) and a Chemical Waste Disposal Report (CWDR) form are completed and approved, the treated sand is transported to MDA J for proper disposal. Barium sand is contained in 55-gallon containers prior to treatment. These containers are cleaned as specified in the paragraph below.

Empty Containers

Empty containers that are disposed of at MDA J are considered emptied pursuant to the EPA RCRA standards defined in 40 CFR §261.7(b). All containers are visually inspected to make sure these standards are met. Empty containers that are of plastic material are directly disposed of in MDA J. Non-plastic containers may be crushed with a drum crusher (located at MDA L) in order to achieve maximum disposal volume at MDA J.

Generators of empty containers, classified as administratively-controlled waste, provide LANL personnel with a completed CWDR that classifies the container as empty, and a

WPF regarding the previous contents of each container. Containers that contained acute hazardous wastes, as described in 20 NMAC 4.1 Subpart II, 261.11(a)(2), are triple-rinsed prior to being crushed. Triple-rinsing is done in accordance with 20 NMAC 4.1 Subpart II, 261.7(b)(3)(i), and the rinsate is managed by LANL as hazardous waste. Until triple-rinsing is completed, crushing and disposal of administratively-controlled waste cannot take place.

If you have any questions regarding any of the information above, please feel free to contact me at (505) 665-5042.

Sincerely,

H. L. "Jody" Plum
Office of Environment and Projects

LAAMEP:2JP-080

cc:
Benito Garcia, Bureau Chief
Hazardous and Radioactive Materials
Bureau
New Mexico Environment Department
2044 Galisteo St., Bldg. A
P. O. Box 26110
Santa Fe, New Mexico 87505