

Reports



*Environmental Protection Division*  
*Water Quality & RCRA Group (ENV-RCRA)*  
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Date: March 9, 2009  
Refer To: ENV-RCRA-09-0043  
LAUR: 09-01465

Mr. James Bearzi, Chief  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303

Dear Mr. Bearzi:

**SUBJECT: CALENDAR YEAR 2008 ANNUAL HAZARDOUS WASTE TREATABILITY STUDY REPORT**

The purpose of this letter is to submit a hazardous waste treatability study report for calendar year (CY) 2008 for the Los Alamos National Laboratory (LANL), EPA ID NM0890010515. This report is required annually by New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Section 200 (20.4.1.200 NMAC) as revised March 1, 2009, (incorporating 40 CFR § 261.4(f)(9)).

There was one treatability study initiated at LANL during CY 2008 and concluded March 4, 2009; enclosed is a status update for this study. There are no other Treatability Studies planned for CY 2009. Your office received a notification for the current treatability study on February 26, 2008 describing a study to separate a waste stream containing both high explosives and mercury to make it amenable for disposal.

In the event that any other treatability studies are proposed for this year, a notice of intent to conduct a study will be prepared and submitted to your office at least 45 days prior to beginning the study, as required by 20.4.1.200 NMAC (incorporating 40 CFR § 261.4(f)(1)). If you have any questions regarding treatability studies at LANL please contact me at (505) 667-0666.

Sincerely,

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

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ARG:LRVH/lm

Enclosure: a/s

Cy: John Kieling, NMED-HWB, Santa Fe, NM, w/enc.  
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**ENCLOSURE 1**

**2008 TREATABILITY STUDY INFORMATION FOR**  
**LOS ALAMOS NATIONAL LABORATORY (LANL)**  
**EPA I.D. NO. NM 0890010515**

***Treatability Study Description:*** Separation of Mercury metal from High Explosives

**Type (by process) of treatability study conducted:**

Use of one or two test methods found suitable to separate Mercury (Hg) and high explosives (HE) and determine the efficiency of the method(s).

**Person conducting the treatability study:**

Jose G Archuleta, Dynamic Experimentation Group (DE-1)

**Type of waste subject to the treatability study:**

- HE infused with Hg metal
- Cellulose products used for filtering and handling of HE/Hg
- Ethanol/silicone oil with HE and Hg (sludge)

Waste from Vacuum Thermal Stability testing (VTS) used to certify HE samples for laboratory use, and waste from mercury porosimetry testing of HE samples for measurement of pore volumes in the material.

**Date the shipment of waste for the treatability study was received:**

Prior to 2008. Waste was stored in a satellite accumulation area.

**Quantity of waste in storage and subjected to treatment each day:**

<b>Waste category</b>	<b>Date of Treatment</b>	<b>Amount of Waste Treated</b>
Legacy waste in cast iron container (total)	2/17/09	2892 grams
Cellulose products (total)	2/24/09	23 grams
HE infused with Hg metal (total)	2/26/09	736 grams

A total of 339 ml of mercury/sludge waste was transferred from satellite accumulation area #419 at Technical Area 9, Building 21, Room 117.

Waste was removed from storage when treatment began for each sample.

**Date the treatability study was concluded:**

March 4, 2009

**Final disposition of residues:**

The waste is composed of:

- Solid insoluble residue powder
- Cellulose filter paper with trace HE
- Silicone fluid with insoluble debris
- Acetone wash with HE
- Mercury metal

All residues, cellulose and fluids will be disposed of at off-site facilities per standing waste profile forms. Mercury metal (filtered through gold adhesion pin hole filter) is put back into the pool for reuse in vacuum thermal stability testing.