



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

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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. James Bearzi, Chief
 Hazardous and Radioactive Materials Bureau
 New Mexico Environment Department
 2044 Galisteo Street, Building A
 P.O. Box 26110
 Santa Fe, New Mexico 87505

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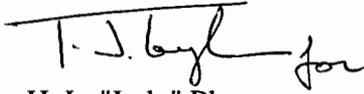
Dear Mr. Bearzi:

Subject: Hazardous Waste Treatability Study Reporting Requirements, Los Alamos National Laboratory (LANL)

The purpose of this letter is to submit hazardous waste treatability study reporting documents as required by Title 20 of the New Mexico Administrative Code, Chapter 4, Part 1, as revised January 1, 1997 (20 NMAC 4.1). The attached document entitled *1999 Treatability Study Information for Los Alamos National Laboratory*, EPA I.D. No. 08900 10515, contains the specific information required for treatability studies conducted in 1999. This document was prepared by the University of California (UC) pursuant to the contract between the Department of Energy (DOE) and UC to conduct operations at LANL.

UC staff at LANL completed three treatability studies in 1999. According to information provided to DOE by UC, one study is ongoing and is scheduled to be completed in July 2000. There are no proposed treatability studies for the next year. In the event that a treatability study is proposed, a notice of intent to conduct the study will be prepared as required by 20 NMAC 4.1. We will provide you with this information as UC submits it to us.

If you have any questions regarding the hazardous waste treatability study reporting documents contained in this report, please contact me at (505) 665-5042 or Christine Nathanson, UC, at (505) 665-9659.

Sincerely,


H. L. "Jody" Plum
 Office of Environment

LAAME:4JP-014

Enclosure



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1999 TREATABILITY STUDY INFORMATION FOR
LOS ALAMOS NATIONAL LABORATORY (LANL)
EPA I.D. NO. NM 0890010515

Type (by process) of treatability study conducted:

Performing Debris Leaching Studies (Treatability study notification: November 12, 1998)

Person conducting the treatability study:

Barbara Smith, CST-12, Los Alamos National Laboratory, MS J964

Type of waste subject to the treatability study:

Mercury contaminated low-level mixed debris waste, EPA hazardous waste number D009.

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

July 16, 1999 and July 26, 1999.

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

DATE	QUANTITY STORED	QUANTITY	TOTAL quantity in process	Comments
07/16/1999	48.6 KG	0	0	
07/19/1999	48.6 KG	0	0	
07/20/1999	48.6 KG	0	0	
07/21/1999	48.6 KG	0	0	
07/22/1999	0	0	48.6 KG	
07/23/1999	0	0	0	
07/26/1999	204.3 KG	0	0	
07/27/1999	204.3 KG	0	0	
07/28/1999	204.3 KG	0	0	
07/29/1999	31.5 KG	172.8 KG	221.4 KG	
07/30/1999				
to	31.5 KG	0	0	
08/22/1999				
08/23/1999	31.5 KG	0	151.4 KG	- 70 KG recycled packing material
08/24/1999				
09/20/1999				

DATE	QUANTITY STORED	QUANTITY	TOTAL quantity in process	Comments
09/22/1999				
to	31.5 KG	31.5 KG	178.8 KG	
12/06/1999				
12/07/1999	0	0	175.4 KG	3.4 KG TCLP removed
12/08/1999				
to				
12/12/1999	0	0	0	0
12/13/1999	0	0	163.9 KG	11.5 KG TCLP removed

Date the treatability study was concluded:

This treatability study is still in progress.

Final disposition of residues:

This treatability study is still in progress.

1999 CONCLUDED TREATABILITY STUDIES AT
LOS ALAMOS NATIONAL LABORATORY (LANL)
EPA I.D. NM 0890010515

Type (by process) of treatability studies conducted:

Recovery and Recycling of Highly Enriched Uranium From Mixed Waste:

- Freon Degradation Residue (Group 1)
- Pyrohydrolysis of Freon Degradation Residue (Group 1)
- Fluorination of Freon Degradation Residue (Group 1)
- X-710 Gunk (Group 2)
- Oil Leak Gunk (Group 3)
- Fluorination of Oil Leak Gunk (Group 3)

Treatability Study notification: September 27, 1996

Personnel conducting the treatability studies:

John FitzPatrick, Los Alamos National Laboratory, CST-7, MS G739
Mike West, Los Alamos National Laboratory, NMT-11, MS A140

Type of waste subjected to treatability studies:

Group 1: Freon Degradation Residue was generated during the degradation process applied to various Freon compounds used at the Portsmouth Gaseous Diffusion Plant (PORT). Fluorine gas reacted with Freon-114 to form carbon tetrafluoride (CF₄). Gaseous metal fluorides reacted with the degrader surface to form nonvolatile transition metal fluorides. The waste carries the hazardous waste numbers D004, D007, and D008.

Group 2: X-710 Gunk is a solid physical form mixed waste generated during routine operations in the PORTS analytical chemistry laboratory. Routine operations included filtration and evaporation. The waste carries hazardous waste numbers D007 and D008.

Group 3: Oil Leak Gunk consists of lubrication oil that leaked into uranium hexafluoride (UF₆) process lines where their subsequent reaction generated a solid physical form mixed waste. The waste carries hazardous waste numbers D007 and D008.

Date the shipment of waste for the treatability studies were received:

Freon Degradar (Group 1): August 25, 1997¹

X-710 Gunk (Group 2): August 25, 1997¹.

Oil Leak Gunk (Group 3): August 25, 1997¹

The quantities of waste accepted:

Freon Degradar Residue, Pyrohydrolysis of Freon Degradar, and Fluorination of Freon Degradar Residue (Group 1): 12.549 kg.

X-710 Gunk(Group 2): 1.272 kg.

Oil Leak Gunk (Group 3): 75.021 kg.

Date treatability studies were initiated:

Groups 1-3: June 3, 1998.

Quantity of waste in storage each day and subject to treatment:

Group 1: FREON DEGRADER RESIDUE:

DATE	QUANTITY IN STORAGE IN KG/DAY	QUANTITY TREATED IN KG/DAY
1/98-10/27/98	12.549	0
10/28/98	12.549	0.00858
10/29/98	12.54	0
10/30/98	12.54	.0262
10/31/98	12.514	0
11/2/98	12.514	0.162
11/3/98	12.352	0.085
11/4/98	12.266	0
11/9/98	12.266	0.022
11/10/98	12.245	0
11/12/98	12.245	0.018
11/13/98	12.227	0.05
11/17/98	12.177	0.189

¹ The treatability studies did not start as scheduled after a stand-down was initiated on September 2, 1997. On September 18, 1997, Los Alamos National Laboratory (LANL) submitted a letter to Mr. Benito Garcia, Bureau Chief of the New Mexico Environment Department's Hazardous and Radioactive Materials Bureau (HRMB) describing the delay. As a result, the treatability studies did not begin until June 3, 1998.

DATE	QUANTITY IN STORAGE IN KG/DAY	QUANTITY TREATED IN KG/DAY
11/19/98	11.988	0.6762
11/20/98	11.312	0
12/2/98	11.312	0.052
12/3/98	11.26	0
12/10/98	11.26	0.6574
12/11/98	10.603	0
1/7/99	9.954	0
1/25/99	9.954	0.6402
1/26/99	9.314	0
2/2/99	9.314	0.5913
2/3/99	8.723	0
2/10/99	8.723	0.6528
2/11/99	8.07	0.6588
2/12/99	7.411	0.56
2/13/99	6.851	0
2/16/99	6.851	0.012
2/17/99	6.839	0
2/18/99	6.839	0.5312
2/19/99	6.308	0.4012
2/20/99	5.907	0
2/22/99	5.907	0.7709
2/23/99	5.136	0.7114
2/24/99	4.424	0.2506
2/25/99	4.174	0
3/3/99	4.174	0.5354
3/4/99	3.6386	0.5019
3/5/99	3.1367	0
3/30/99	3.1367	0.9799
3/31/99	2.1568	0
4/6/99	2.1568	0.50905
4/7/99	1.64775	0.5523
4/8/99	1.09545	0.539
4/9/99	0.55645	0
4/13/99	0.6027	
4/14/99	-0.04625	0
5/20/99	-0.04625	0.0152
5/21/99	-0.06145	0

Group 2: X-710 GUNK

DATE	QUANTITY IN STORAGE IN KG/DAY	QUANTITY TREATED IN KG/DAY
1/1/98-6/1/98	1.272	0
6/2/98	1.272	0.25
6/3/98	1.022	0.25
6/4/98	0.772	0
6/9/98	0.772	0.25
6/10/98	0.522	0.85
6/11/98	-0.328	0
6/24/98	-0.328	0.25
6/25/98	-0.578	0

Group 3: OIL LEAK GUNK

DATE	QUANTITY IN STORAGE IN KG/DAY	QUANTITY TREATED IN KG/DAY
1/1/98-4/13/99	75.021	0.144
4/14/99	75.021	0.144
4/15/99	74.777	0.1172
4/16/99	74.6598	0.33254
4/17/99	74.32726	0
4/21/99	74.32726	0.6775
4/22/99	73.64976	0

Date the treatability studies were concluded:

Group 1-3: June 3, 1999- unused samples were subsequently sent back to the generator, Portsmouth. Study residues and newly generated waste are currently in storage in the LANL, Technical Area 3, bldg. 29, room 9020 mixed waste container storage area.

Mr. H.L. "Jody" Plum
Los Alamos Area Office
U.S Department of Energy
528 35'th Street, MS A316
Los Alamos, New Mexico 87544

Dear Mr. Plum:

**SUBJECT: HAZARDOUS WASTE TREATABILITY STUDY REPORTING
REQUIREMENTS**

Enclosed for your review and approval is a draft letter to the New Mexico Environment Department (NMED) notifying them of the Laboratory's intent to perform hazardous waste Treatability studies for 2000, as required in Title 20 of the New Mexico Administrative Code, Chapter 4, Part 1 (20 NMAC 4.1), which incorporates Title 40 of the Code of Federal Regulations, Part 261.4(f)(9). This notification also includes information on Treatability studies performed during 1999, as required.

Please transmit the enclosed reporting documents to NMED by March 15, 2000, in order to meet the required submittal deadline. If you have questions or would like to discuss the contents of the reporting requirements, please contact Christine Nathanson at 665-9659.

Sincerely,

Christine Nathanson
Hazardous and Solid Waste
Group (ESH-19)

Enclosures

Cy: Christine Nathanson, ESH-19, MS K490
Transmittal letter to NMED