



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

MAR 15 1999



VIA HAND DELIVERY

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

Dear Mr. Garcia:

Subject: Hazardous Waste Treatability Study Reporting Requirements

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 (20 NMAC 4.1), which incorporates Title 40 of the Code of Federal Regulations, Part 261.4(f)(9).

Los Alamos National Laboratory (LANL) has five proposed treatability studies for the calendar year 1999. The enclosed document entitled *Proposed Treatability Studies for 1999 at Los Alamos National Laboratory* contains estimates of the amount of waste expected to be used in each treatability study. It should be noted that although LANL anticipates doing these treatability studies during 1999, funding or programmatic issues may cause some proposed projects to be postponed or canceled. In calendar year 1997, twenty-four treatability studies were proposed but did not start for the same reasons.

LANL has three treatability studies still in progress. These studies are in the enclosure entitled *1998 Treatability Study Information for Los Alamos National Laboratory*. The following is some information regarding these particular studies.

In 1997, the New Mexico Environment Department (NMED) was initially notified regarding seven mixed waste treatability studies to be conducted at the Chemistry and Metallurgy Research (CMR) Building. The first mixed waste samples were received on August 25, 1997. On September 2, 1997, the CMR building was placed in a stand-down-mode for operation because of safety concerns. On September 18, 1997, the Department of Energy notified NMED that LANL would place the mixed waste samples received for the studies in interim status storage until operations at CMR were such that the proposed treatability studies could commence.



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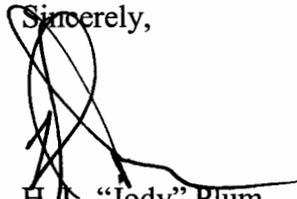
Benito Garcia

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By June 4, 1999, the three treatability studies still in process will be completed and any unused sample or residue generated will be returned to the sample generator. The other four studies that were to be conducted at the CMR will not be started.

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

Sincerely,

A handwritten signature in black ink, appearing to be "H.J.L. 'Jody' Plum". The signature is written in a cursive style with a long horizontal tail extending to the right.

H.J.L. "Jody" Plum
Office of Environment

LAAME:6JP-124

Enclosures

Los Alamos

NATIONAL LABORATORY

Hazardous & Solid Waste Group (ESH-19)

P.O. Box 1663, MS K490

Los Alamos, New Mexico 87545

(505) 665-9527 FAX (505) 667-5224

Proposed Treatability Studies for 1999 at
Los Alamos National Laboratory (LANL)
EPA I.D. no. NM0890010515

Treatability Study	Estimated Amount of Waste to be Treated
1.	500 kilograms (kg) [°]
2.	1 kg [°]
3.	5 kg [°]
4.	275 kg [°]
5.	1000 kg [*]

Total amount of Estimated waste.....1781 kg.

[°] These treatability studies have not been submitted to New Mexico Environment Department (NMED), Hazardous and Radioactive Materials Bureau (HRMB) in the calendar year 1999. These treatability studies have not been started.

^{*} Notification to conduct this treatability study has been submitted to NMED's HRMB in the calendar year 1999 but has not been conducted to date.

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1998 Treatability Study Information from
Los Alamos National Laboratory (LANL)
EPA I.D. No. NM0890010515

Type (by process) of treatability study conducted:

Recovery and Recycling of Highly Enriched Uranium from Mixed Waste:

- Freon Degradation Residue
- x-710 Gunk
- Fluorination of Oil Leak Gunk

Personnel conducting the treatability studies:

John R. FitzPatrick, Los Alamos National Laboratory, NMT-2, Los Alamos, NM 87545

Types of waste subject to each treatability study:

There are three types of wastes received, all are mixed wastes:

- 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. Gaseous metal fluorides reacted with the degrader surface to form nonvolatile transition metal fluorides. The degrader waste consists of metal fluorides and nonvolatile uranium fluorides. The hazardous waste characterization numbers are D004, D007 and D008.
 - 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 hazardous waste characterization numbers are D007 and D008.
 - 3.) Oil leak Gunk consists of lubrication oil that leaked into uranium hexafluoride process lines where their subsequent reaction generated a solid physical form mixed waste. The hazardous waste Characterization numbers are D007 and D008.
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Date the shipment of waste for the treatability studies were received:

The first samples were received August 25, 1997, a second shipment was received April 15, 1998.

Quantity of "as received" waste accepted and amount of each waste type in storage each day:

- 1) Freon Degradar: 12.549 kg
- 2) X-710 Gunk: 1.272 kg
- 3) Oil Leak Gunk: 75.021 kg

Quantity of waste in storage each day:

Please refer to the following pages for tables 1-3:

- Table 1: quantity in storage for the Freon Degradar.
- Table 2: quantity in storage for x-710 Gunk.
- Table 3: quantity in storage for Oil Leak Gunk

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TABLE 1: Freon Degradation

Date	Quantity in Storage In Kilograms (kg)	Quantity Treated (kg)
10/28/98	12.549	.0086
10/29/98	12.540	0
10/30/98	12.540	.026
10/31/98	12.514	0
11/1/98	12.514	0
11/2/98	12.514	.162
11/3/98	12.352	.009
11/4/98	12.343	0
11/9/98	12.343	.022
11/10/98	12.321	0
11/12/98	12.321	.018
11/13/98	12.304	.050
11/14/98	12.254	0
11/17/98	12.254	.189
11/18/98	12.065	0
11/19/98	12.065	.605
11/20/98	11.459	0
12/2/98	11.459	.052
12/3/98	11.407	0
12/10/98	11.407	.658
12/11/98	10.749	0
1/6/99	10.749	.6492
1/7/99	10.100	0
1/25/99	10.100	.6402
1/26/99	9.460	0
2/2/99	9.460	.5913
2/3/99	8.869	0
2/10/99	8.869	.6528
2/11/99	8.216	.6588
2/12/99	7.557	0
2/18/99	7.557	.4012
2/19/99	7.156	.4012
2/20/99	6.755	0
2/22/99	6.755	.3936
2/23/99	6.361	.715
2/24/99	5.646	.2506
2/25/99	5.396	0

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TABLE 2: X-710 Gunk:

Date	Quantity in Storage (kg)	Quantity treated (kg)
6/1/98	1.272	.25
6/2/98	1.022	.25
6/3/98	.772	.25
6/4/98	.522	0
6/9/98	.522	.25
6/10/98	-0.328	.85
6/11/98	-0.578	0
6/24/98	-0.578	.25
7/1/98	0	0

TABLE 3: Oil Leak Gunk:

Date	Quantity in Storage (kg)	Quantity treated (kg)
1/1/98	75.021	0
2/28/99 to current	75.021	0

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Date the treatability study was concluded:

Not applicable¹

Final disposition of residues from each treatability study:

Not applicable²

¹ The mixed waste sample treatments have not been completed 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). As a result of the stand-down, treatability studies were not resumed until the following year. Therefore, studies will be concluded on June 4, 1999.

² The treatability studies have not been concluded. Please refer to footnote 1 for information on the status of treatability studies.