



Department of Energy
Albuquerque Operations Office
Los Alamos Area Office
Los Alamos, New Mexico 87544
AUG 08 1997

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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Janice Archuleta
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
2044 Galisteo St., Bldg. A
P. O. Box 26110
Santa Fe, NM 87505



Dear Ms. Archuleta:

Subject: Lead Segregation Activities, Los Alamos National Laboratory (LANL) Federal Facility Compliance Order (FFCO), October 4, 1995 - Notification of Completion of Activity in Section 3.4.1

The purpose of this letter is to notify the New Mexico Environment Department (NMED) of completion of a required activity approved initially by NMED in its July 15, 1996 letter. This activity, to be incorporated formally into the Site Treatment Plan (STP) in an upcoming revision of the FFCO (as discussed in our letter of July 2, 1997), is to "*(S)egregate lead waste into decontamination groupings*" by July 31, 1997. LANL was required to complete this activity for those lead shapes and forms found to be "*not amenable to processing using the lead decontamination trailer.*" This Notification is required by Section XX of the FFCO.

Incorporation of This Activity in the STP

Activity B listed in Section 3.4.1 of the Compliance Plan Volume (CPV, Exhibit A, Rev. 1.0) of the STP required that, by June 30, 1996, the Department of Energy (DOE) and the University of California (UC) "*provide (a) schedule for development of lead processing techniques and options.*" LANL was required to complete this schedule for those lead shapes and forms found to be "*not amenable to processing using the lead decontamination trailer.*" This schedule was provided to NMED on June 26, 1996, and NMED approved it by letter dated July 15, 1996, stating it had been incorporated into Revision 1.0. However, NMED stated in its February 25, 1997 letter that the Revision 1.0 incorporation had been made in error, and that a new revision will be required in order to incorporate this schedule formally in the CPV.

In our July 2, 1997 letter, we proposed to include this schedule, as well as several additional items, in the hard copy and electronic copy of the Rev 4.0 and 5.0 changes to the CPV currently in preparation at LANL. Incorporation of this schedule into the Rev 4.0 and 5.0 revision package was suggested by NMED in its February 25, 1997 letter. The first activity in the June 26, 1996 schedule was to complete the lead segregation by July 31, 1997. Although this activity is not yet a formal FFCO/STP requirement, DOE and UC proceeded to complete the activity, as reported below.



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Background

The lead in question is "lead for surface decontamination," MWIR waste ID number LA-W930, consisting originally of 125 items with a total volume of 56.20 cubic meters (m³). Section 3.4.1 of the STP was finalized in October 1995 with the presumption that all lead in this treatability group fell into two broad categories: lead amenable to decontamination in the on-site lead decontamination trailer, and lead not amenable to decontamination in the on-site lead decontamination trailer.

- **Lead in the first category.** The portion of this category consisting of lead bricks was decontaminated on-site using the lead decontamination trailer, which was designed to decontaminate simple lead shapes, such as lead bricks, of certain physical dimensions. Prior to the issuance of the FFCO, this trailer, as supplemented by additional decontamination methods, was used to successfully decontaminate over 140,000 pounds of lead on-site (consisting of approximately 83 items, or 14.43 m³ from LA-W930, plus lead items from other treatability groups), in compliance with the Federal Facility Compliance Agreement milestone LD200.

The LD200 effort included an extensive investigation of drum contents, with sorting as necessary, to locate all lead bricks known to be in the legacy Mixed Low-Level Waste (MLLW) inventory, followed by decontamination of the bricks. As a result, to the best of our knowledge in October 1995, we believed that all of the lead bricks in the first category of this treatability group (lead that was amenable to decontamination in the on-site lead decontamination trailer) had been processed prior to the effective date of the STP.

- **Lead in the second category.** The activities in the schedule provided to NMED on June 26, 1996 were intended to apply only to the lead in the second category of the original LA-W930 inventory (approximately 42 items, or 41.78 m³, including both drums of lead in various forms and several lead-containing gloveboxes). The first activity proposed was to sort this lead by July 31, 1997, so that it can then be processed using both on-site and off-site lead decontamination services. Any lead not acceptable for off-site lead decontamination, plus any lead unsuccessfully decontaminated, will be designated either for treatment by macroencapsulation and disposal at an off-site facility, or for recycle through an off-site service such as a metal melting facility that creates shielding blocks, or a DOE lead bank (some off-site capability has become available, while some has yet to be developed). Non-conforming items will be reassigned to appropriate treatability groups in accordance with the FFCO.

Since October 4, 1995, lead has been added to the original LA-W930 inventory, as noted in the March 1996 and March 1997 *Annual Updates* (see enclosed Table 1). This added inventory consists of approximately 109 items (22.50 m³) of lead removed from the original LA-W930 inventory during the LD200 effort that could not be released for off-site recycle, which LANL returned to the MLLW inventory; and six items (1.25 m³) of MLLW which became newly covered waste during FY 1996. The 109 returned items that could not be immediately released for off-site recycle included some successfully decontaminated lead that LANL conservatively elected to continue managing as MLLW for the time being, and other unsuccessfully decontaminated lead items that continue to be MLLW.

These LA-W930 inventory changes since October 4, 1995 will be incorporated formally in the CPV inventory when Revision 5.0 is approved (excepting any of the successfully decontaminated lead that can now be released for off-site recycle, as will be discussed below).

Description of Activity Completed on July 31, 1997

The process for using off-site lead decontamination services is a multi-step process intended to ensure that as much of the lead as possible is recycled instead of treated and disposed. First, the acceptance criteria for existing, proven off-site lead decontamination services were identified. The lead waste was segregated and sorted into appropriate groupings (e.g., lead sheets, lead shot, lead shavings, lead pieces, lead pigs, etc.), and the volume and other data for each grouping were determined. This segregation/ sorting process was applied to all lead still on-site that is currently known to be in LA-W930, including the lead proposed for addition to the inventory in Revision 5.0 (i.e., to all 157 items, not only the 42 items in the original STP inventory remaining in the second category). The results are presented in the enclosed Table 2.

Next Steps

The following next steps will be taken for the inventory in LA-W930:

- **Lead in the first category.** The segregation process resulted in identification of additional lead that is amenable to processing using the on-site trailer; however, the trailer may require upgrading before it would again become operational. Instead, DOE and UC plan to pursue alternative methods to decontaminate this additional lead either on- or off-site, in order to complete decontamination of all lead in the first category. Of the 41 remaining items in this category (see Table 1), six items (6.59 m³) must be processed prior to the September 30, 1997 due date for the original STP inventory subject to CPV Activity 3.4.1A, or a change to this compliance date must be approved by NMED. Additional compliance dates will be requested to address the 35 items of additional LA-W930 waste (additions to the original STP inventory) discovered to be amenable to processing in the trailer, as necessary.
- **Lead in the second category.** Processing of the 36 "not amenable" items in the original STP inventory, and the 80 "not amenable" additions to the original STP inventory, as shown in Table 1, will follow the dates in the June 26, 1996 schedule, following NMED's approval of the schedule in the revisions. A Request for Proposal will be issued to solicit proposals from the various lead decontamination services. After award of the contract(s) for lead decontamination services, the lead in the second category will be decontaminated and recycled.
- **Verification of containers subject to STP.** During sorting/segregation activities, it was verified that six containers of legacy waste subject to the STP were not in storage. These items represent two fiberglass reinforced boxes and four containers. DOE and UC will request that these items be deleted from the STP under separate cover prior to the September 30, 1997 due date for CPV Activity 3.4.1A.
- **Incorporation of the schedule into the STP.** The formal revision request for the June 26, 1996 schedule will be completed and submitted under separate cover for NMED's approval in a single, consolidated package, along with the Rev 4.0 and 5.0 changes to the CPV, in hard copy and electronic copy format. As stated above, additional compliance dates will be

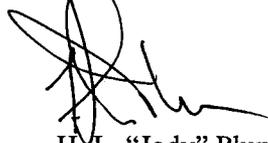
Janice Archuleta

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requested to address the 35 items of additional LA-W930 waste (additions to the original STP inventory) discovered to be amenable to processing in the trailer, as necessary.

A Certification statement is provided as an enclosure. Please contact me at (505) 665-5042 or Ken Hargis at (505) 667-2347 if you have any questions.

Sincerely,



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

LAAMEP:6JP-034

Enclosures

cc w/enclosures:

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

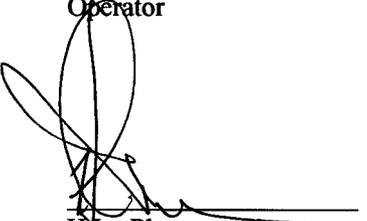
CERTIFICATION

**LEAD SEGREGATION ACTIVITIES, LOS ALAMOS NATIONAL LABORATORY (LANL)
FEDERAL FACILITY COMPLIANCE ORDER (FFCO), OCTOBER 4, 1995 - NOTIFICATION
OF COMPLETION OF ACTIVITY IN SECTION 3.4.1**

I certify that I am the project manager responsible for overseeing the implementation of the Site Treatment Plan for the Los Alamos National Laboratory. To the best of my knowledge and belief, the information in this document is true, accurate, and complete.


Ken Hargis
Manager of Operations
Waste Management Program
Environmental Management Programs
Los Alamos National Laboratory
Operator

7 August 1997
Date Signed


H.L. Plum
Regulatory Permitting and Compliance Manager
Los Alamos Area Office
U.S. Department of Energy
Albuquerque Operations
Owner/Operator

8 August 1997
Date Signed

Table 1
Inventory in LA-W930

Description	Total		Amenable to Lead Decon Trailer		NOT Amenable to Lead Decon Trailer		Comments
	Number of Items	Volume (m ³)	Number of Items	Volume (m ³)	Number of Items	Volume (m ³)	
Original STP inventory	125	56.20					
Items removed from inventory by LD200 effort (decontamination or sorting)	- 83*	- 14.43*					Reported in March, 1996 <i>Annual Update</i>
Remaining items from original inventory	42	41.78	6	6.59	36	35.19	
Additions to original STP inventory							
Items returned to inventory from LD200 effort	+ 109	+ 22.50	30	6.25	79	16.26	Reported in March, 1996 <i>Annual Update</i>
Newly generated waste in FY95 that became covered waste in FY96	+ 6	+ 1.25	5	1.04	1	0.21	Reported in March, 1997 <i>Annual Update</i>
Net covered waste as of October 1, 1996	157	65.53	41	13.88	116	51.66	

*The March, 1996 *Annual Update* reported 84 items (14.64 m³) as being removed from inventory. This was incorrect because one drum that had been returned to storage without the database being updated to reflect it was in storage instead of decontaminated. This correction to the March, 1996 *Annual Update* will be reflected in Revision 5 to the STP.

Table 2
LA-W930 Wastes Segregated

Description	Number of Items	Volume (m ³)
Items amenable to decontamination in the Lead Decon Trailer		
Sorted during LD200 effort	8	1.67
Lead bricks decontaminated during LD200 effort	22	4.58
Sorted at TA-50	8	1.76
Sorted at TA-54	3	5.87
Subtotal - amenable	41	13.88
Items not amenable to decontamination in the Lead Decon Trailer		
Sorted during LD200 effort	79	16.26
Lead bricks decontaminated during LD200 effort*	0	0.00
Sorted at TA-50	21	2.29
Sorted at TA-54	10	24.76
Subtotal - not amenable	110	43.31
Verification of containers subject to STP (not in storage/request for deletion to be submitted)	6	8.34
Total sorted	157	65.53

*As discussed in the text, some items decontaminated in the LD200 campaign were processed on-site using decontamination methods other than the trailer.