Janise

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

MAR 3 0 1998

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

MAR 1998 RECEIVED

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

Dear Mr. Garcia:

Subject:
1. Site Treatment Plan Fiscal Year 97 Annual Update, Los Alamos National Laboratory; (Background of [illegible])
2. Request for Revision 6.0 to Site Treatment Plan, Compliance Plan Volume, Los Alamos National Laboratory;
3. Notification of Completion of Activities 3.4.2 J and K; and
4. Corrections to Previous Shipment Notification Letters

The purpose of this letter is to transmit the Los Alamos National Laboratory (LANL) Fiscal Year 97 (FY97) Site Treatment Plan (STP) *Annual Update* to the New Mexico Environment Department (NMED), in response to the requirements of the Federal Facility Compliance Order (FFCO), October 4, 1995, as revised, Section VII, "*Annual Site Treatment Plan Updates*." The *Annual Update* is provided in two volumes. Enclosure A is *LANL's Background Volume (BV) Update* for FY97. Enclosure B is LANL's *Compliance Plan Volume (CPV) Update* for FY97.

This letter also transmits proposed Revision 6.0 for the LANL STP CPV. This request has been prepared for NMED by the Department of Energy (DOE) and the University of California (UC), in accordance with the requirements of Section X.C.2, "*Revisions*," of the FFCO.

Included in the proposed Revision 6.0 is the transfer of the sole waste item (0.00002 m^3) in MWIR waste ID subgroup LA-W929-5, "*Nonradioactive or Suspect Waste Items to be Surveyed,*" to LA-W933, "*Lab Packs,*" thereby completing CPV Activities 3.4.2 J and K. Activity 3.4.2 J requires that DOE and UC "*(S)ubmit documentation assigning waste items to applicable treatability groups or proposing off-site treatment dates*" by March 31, 1998. This waste item was added to the STP covered waste inventory in Revision 5.0; the transfer of this item is consistent with the process described in Revision 4.0 for other items that were transferred from LA-W929-0. In addition, Activity 3.4.2 K requires that DOE and UC "*Propose additional compliance dates if necessary*" by March 31, 1998. No new compliance dates are being requested for the treatment of this transferred waste. Please regard this letter as our official notification, as required by Section XX of the FFCO, of the completion of Activities 3.4.2 J and K.

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While preparing the *Annual Update* and reviewing our data for the mixed low-level waste waste volumes, we discovered that some of the volumes, and in one case the number of items, reported

in our shipment notification letters were not accurate. We regret our oversight in not conveying the correct numbers contained in this data when we prepared our notification letters. These notifications occurred before the completion of our STP Corrective Action Plan and the letters were not subjected to the rigor of our current level of quality control. The corrected data are listed in the table below. Please regard this letter as our official notification of the corrected data.

Treatability Group	MWIR waste ID	Notification Letter Date	Incorrect Data	Correct Data	Discussion
Activated or Inseparable Lead	LA-W921	September 20, 1996	No. of Items - 48 Volume (m^3) - 9.37	No. of Items - 49 Volume (m^3) - 9.05	This was one of our earliest shipments and we were still determining how to summarize and verify the data. Subsequent verification determined that the reported data was incorrect.
Halogenated Organic Liquids	LA-W907	January 9, 1997	Volume (m^3) - 0.04	Volume (m^3) - 0.0076	This was a typographical error (the incorrect number was copied from the previous line).
Nonhalogen-ated Organic Liquids	LA-W908	January 9, 1997	Volume (m^3) - 0.473	Volume (m^3) - 0.49	To comply with shipping regulations, one drum of waste was split into two drums, however, the volume of the second drum was inadvertently omitted in the addition to determine the total volume reported in the notification letter. This change corrects the total waste volume as reported in the notification letter.

As to the requested revision, DOE and UC are proposing to revise the CPV language to incorporate the following changes:

- Changes in Mixed Low-Level Waste (MLLW) covered waste inventories during FY97, discussed in the FY97 STP *Annual Update*;
- Two new compliance dates for newly added MLLW that became covered waste in FY97; and
- Other corrections and volume changes for MLLW covered waste inventory as discussed in the request for Revision 6.0.

Information required by FFCO Section X.C.2, "*Revisions*," supporting our revision request is provided in Enclosure C to this letter. A red-line/strikeout version of the proposed CPV text for NMED's approval is given in Enclosure D and a clean copy version is provided in Enclosure E.

Wastes were tentatively assigned to appropriate treatability groups in the FY97 *Annual Update*. In

some instances, the wastes being added to some treatability groups bear additional EPA hazardous waste codes in addition to those given in the current CPV inventory; these are noted where applicable in the proposed revision text. Additional compliance dates are requested in two cases where the additional covered wastes which became covered waste in FY97 and cannot be treated within the existing compliance dates specified for those treatability groups.

In the event that NMED believes the approval of this revision will be delayed, DOE and UC would like the opportunity to submit a separate revision or amendment to allow the specific covered wastes targeted for treatment to proceed with shipment for treatment in an expeditious manner, while this revision request undergoes completion of the review and approval process.

As LANL engages in legacy cleanup programs or other activities, the potential exists for additional covered waste to be identified. These additions to the STP overed waste inventory, if any, will be addressed in future revisions.

DOE and UC anticipate the submission of a request for Revision 7.0 within two months. This request, heretofore referred to as the "Mega Revision," will revise the CPV text to remove the treatment skids and otherwise clean up the CPV text based on the evolution of LANL's mixed waste treatment strategy since the CPV was initially issued on October 4, 1995. In addition, DOE and UC will incorporate into Revision 7.0 the corrections to the CPV requested in NMED's letter dated February 18, 1998 and the associated changes to the text and tables in Section 2.1.4 of the CPV.

A Certification statement is provided as Enclosure F. LANL's records and documents related to these requests are available to NMED staff upon request. We look forward to discussing the information contained in this letter with you at your earliest possible opportunity. We request that you inform us in writing immediately should you have any concerns regarding our timely and full compliance with FFCO requirements. Please contact me at (505) 665-5042 or Ken Hargis at (505) 667-2347 if you have any questions.

Sincerely,

H. L. "Judy" Plum
Office of Environment

LAAME:6JP-054

Enclosures

cc w/enclosures:
Ms. Janice Archuleta
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
2044 Galisteo St., Bldg. A
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Santa Fe, NM 87505

ENCLOSURE A

ANNUAL SITE TREATMENT PLAN UPDATE FOR FISCAL YEAR 1997

BACKGROUND VOLUME (BV) UPDATE

Los Alamos National Laboratory

Federal Facility Compliance Order

Annual Site Treatment Plan Update for Fiscal Year 1997

Background Volume

March 31, 1998

Los Alamos

NATIONAL LABORATORY

EXECUTIVE SUMMARY

The Los Alamos National Laboratory (LANL) Site Treatment Plan (STP) Fiscal Year 1997 (FY97) Update (Update) has been prepared in accordance with the requirements of Section VII, "*Annual Site Treatment Plan Updates*," of the October 4, 1995, Federal Facility Compliance Order (FFCO) (1) By definition, the STP refers to both the Background Volume (BV) and the Compliance Plan Volume (CPV). Unless otherwise specified, its focus is on FY97 (October 1, 1996, through September 30, 1997), as required by Section VII of the FFCO.

Background Volume Update

Section 2.0 of the BV Update brings the STP BV current to the end of the previous federal fiscal year (FY) with respect to:

- the estimated inventory of covered waste in storage at the end of FY97 and projections of the inventory of covered waste expected to be placed into storage for the next five years;
- progress reports on treatment and treatment technology development;
- a report on the funding of STP-related activities;
- the status of the Waste Isolation Pilot Plant (WIPP) "No-Migration Variance Petition," which is the only treatment variance potentially applicable to LANL's covered waste for which a petition had been pending when the FFCO was issued; and
- a progress report for the treatment of mixed transuranic (MTRU) waste intended for disposal at the WIPP.

Covered Waste

The inventory presented in the Final STP (October 4, 1995) was for mixed low level waste (MLLW) in storage before October 1, 1994 and MTRU in storage before December 1992, regardless of its time of generation or its state of compliance with the Land Disposal Restrictions (LDRs) storage requirements. In addition, some wastes reported in the FY95 Update were in the LANL mixed waste inventory at that time, but inadvertently had been omitted from the final STP inventory. All such untreated waste now meets the definition of "covered waste" in the FFCO. For reference, this Update repeats inventory information presented in the FY96 Update and describes changes to the covered waste inventory that occurred in FY97. Mixed waste that was generated in FY97 is not included in this FY97 update, because it is not a covered waste under the FFCO until it exceeds the LDR 1-year storage limitation.

Because other documents published by the DOE require different reporting parameters and periods, the volumes of covered waste reported in this Update may not be the same as the volumes of LANL's mixed waste reported in other documents. Examples of such

references are the "*1997 Hazardous Waste Report for Los Alamos National Laboratory, Volumes I and II,*" (LANL's Biennial Report) (2), and the *DOE Transuranic Waste Baseline Inventory Report* (TWBIR or BIR) (3).

During FY97, MLLW covered inventories decreased by 40% in the aggregate, from ~584 to ~348 m^3. Nine treatability groups were reduced over the period, while an additional 13 increased above FY96 reported values. Table ES-1 summarizes changes to the estimated MLLW covered waste inventory for FY97. Approximately 50 m^3 of new waste became covered during FY97, and about 31 m^3 of covered waste was treated, recycled, or decontaminated during the period. The single largest decrease to the covered inventory was the removal of 255 m^3 of Dewatered Treatment Sludges (LA-W928) as an administrative adjustment. A number of other administrative corrections from previous submittals are also identified in this update, but these are generally offsetting and the overall change is less than .5 m^3. All changes to the covered MLLW inventory are presented and explained by Treatability Group in Table 2-1.

TABLE ES-1: MLLW Inventory Summary

Contribution	Volume (M3)
MLLW Inventory Reported in FY96 Annual Update	**584.1**
New Covered Waste	+49.8
Onsite Decontamination	-8.0
Offsite Decontamination/Recycle	-1.7
Offsite Treatment	-21.0
Treatability Study Use	+0.1
Administrative Adjustments	-255.5
Administrative Corrections	+0.5
MLLW Inventory Reported in FY97 Annual Update	**348.3**

MTRU covered inventories increased slightly from FY96 levels, with a total volume increase of ~7 m^3 over the fiscal year. This increase is the result of new waste generation at LANL, and corresponds to an increase of 0.1% over FY96 inventories. Table ES-2 summarizes MTRU volume increases during FY97.

Table ES-2: MTRU Inventory Summary

Contribution	Volume (M3)
MTRU Inventory Reported in Rev 5	**5981.8**
New Covered Waste	+6.9
MTRU Inventory At End of FY97	**5988.7**

Treatment Progress and Treatment Technology Development

Since 1996, DOE and LANL have pursued off-site treatment and disposal as the primary means to reduce and eliminate on-site waste inventories. While previous versions of the STP Update provided summaries of on-site and DOE-wide technology development initiatives for covered wastes, the range of supported activities has been sharply reduced over the past several years. The availability of commercial off-site treatment and disposal capacity for MLLW has continued to increase, and while some sites within the DOE complex are pursuing the development and permitting of mixed waste treatment facilities for selected DOE wastes, LANL intends to rely on commercial capabilities as much as possible. Commercial and government off-site treatment facilities are being used to treat appropriate LANL waste streams well in advance of their compliance activity due dates. During FY97, off-site shipment provided cost and time savings as compared to fabricating, permitting, and operating mobile treatment units (MTUs) onsite at LANL, as was originally planned. DOE and UC are continuing to evaluate new commercial and DOE off-site treatment facilities as potential options for managing covered MLLW, as they become available.

Funding

Funding to implement the LANL Site Treatment Plan for mixed waste during FY97 was sufficient to meet all compliance dates for FY97 required by the STP as issued on October 4, 1995. Funding was reduced for development of mobile treatment units at LANL, but DOE's resources were directed at shipment of mixed waste off site for treatment and disposal. Projected funding for FY98 should again allow all compliance dates in the STP to be met during FY98.

TRU Waste Characterization and Treatment

As the result of the WIPP Land Withdrawal Act Amendments (LWAA) of 1996, a No Migration Variance Petition is no longer required at WIPP, and the EPA has terminated its review of DOE's No-Migration Variance Petition (2). To date, the DOE has met its schedule for submittal of regulatory documents related to opening WIPP.

Two 1997 Records of Decision (RODs) led to the DOE announcement that the WIPP will be the disposal site for TRU waste prepared and stored at individual sites in the DOE complex. Further, DOE plans to ship Sandia National Laboratories TRU waste to LANL for preparation for WIPP disposal. These RODs are based on two environmental impact statements (EISs) completed in FY97:

1. Waste Isolation Pilot Plant Disposal Phase Final Supplemental Impact Statement (WIPP SEIS-II), Sept 1997.
2. Waste Management Programmatic Environmental Impact Statement (WM PEIS), May 1997.

In addition, EPA published a preliminary approval of the WIPP in "40 CFR Part 194, Criteria for the Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR 191 Disposal Regulations: Certification Decision; Proposed Rule."

No treatment variances for WIPP were requested or granted in FY97.

At the WIPP facility, no capabilities for characterizing TRU waste for hazardous waste constituents or treatment of MTRU to meet the LDR standards were developed, or planned to be developed, as of the end of FY97. No treatment technologies for MTRU waste had been developed at LANL as of the end of FY97.

Compliance Plan Volume Update

Section 2.0 of the CPV Update includes a description of revisions and amendments involving compliance date changes that were proposed or approved in FY97. Section 3.0 is provided for the purpose of describing deletions of STP waste, in accordance with the requirements in Section IX (*Deletion of Waste*) of the FFCO, that were proposed or approved in FY97. Section 4.0 discusses additions of new covered waste in accordance with the requirements in Section VIII (*Addition of New Covered Waste*), that were proposed or approved in FY97. Section 5.0 is provided for the purpose of describing any other changes to the overall schedule in the CPV of the STP that were proposed or approved in FY96. Section 6.0 is provided for the purpose of describing any planned changes to the STP that were proposed or approved since the end of FY97.

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ACRONYMS

AMWTP	Advanced Mixed Waste Treatment Project
BIR	Transuranic Waste Baseline Inventory Report (see also TWBIR)
BV	Background Volume
CCA	Compliance Certification Application
CHEAPER	Chemical Exchange Assistance Program and External Recycling
CIF	Consolidated Incineration Facility
CPV	Compliance Plan Volume
CRD	Cylinder Recontainerization Device
CY	Calendar Year
DOE	Department of Energy
DOE/AL	DOE Albuquerque Operations Office
DSSI	Diversified Scientific Services, Inc.
EM	Environmental Management
EPA	Environmental Protection Agency
FFCAgreement	EPA Federal Facility Compliance Agreement
FFCAct	Federal Facility Compliance Act
FFCO	Federal Facility Compliance Order
FY	Fiscal Year
GJPO	Grand Junction Project Office
HEPA	high-efficiency particulate air
INEEL	Idaho National Engineering and Environmental Laboratory
IDB	Integrated Data Base
IPAs	Isopropyl Alcohols
LANL	Los Alamos National Laboratory
LAPRE II	Los Alamos Power Reactor Experiment No. II
LDRs	Land Disposal Restrictions (RCRA)
LWAA	Land Withdrawal Act Amendments
LLW	Low-Level Waste
MEO	Mediated Electrochemical Oxidation
MTU	Mobile Treatment Unit
MLLW	Mixed Low-Level Waste
MTRU	Mixed Transuranic
MWIR	Mixed Waste Inventory Report
MWTP	Mixed Waste Treatment Plan
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NMED	New Mexico Environment Department

NMVP	No-Migration Variance Petition
NFS	Nuclear Fuel Services Inc
NSSI	Nuclear Support Services, Inc.
ORNL	Oak Ridge National Laboratory
OR	Oak Ridge Operations Office
PCB	Polychlorinated Biphenyl
QA/QC	Quality Assurance/Quality Control
RLWTP	Radioactive Liquid Waste Treatment Plant
RCRA	Resource Conservation and Recovery Act
RD&D	Research, Development, and Demonstration
RLWTF	Radioactive Liquid Waste Treatment Facility
S&A	Sampling and Analysis
SRS	Savannah River Site
SEG	Scientific Ecology Group, Inc.
SSD	Sort, Survey, and Decontamination
STP	Site Treatment Plan
TCLP	Toxicity Characteristic Leaching Procedure
TRU	Transuranic
TSCA	Toxic Substances Control Act
TWBIR	Transuranic Waste Baseline Inventory Report
UC	University of California
WERF	Waste Experimental Reduction Facility
WIPP	Waste Isolation Pilot Plant

1. INTRODUCTION

On October 4, 1995, the New Mexico Environment Department (NMED) issued a Federal Facility Compliance Order (FFCO) to the Department of Energy (DOE) and its management and operating contractor, the University of California (UC) Regents, requiring Los Alamos National Laboratory (LANL) to implement the Site Treatment Plan (STP) for the treatment of mixed waste. The FFCO contains many provisions for implementation of the STP, including Section VII of the FFCO which requires LANL to submit an Annual Site Treatment Plan Update (Update) to the NMED each year on or before March 31.

This Background Volume Update is provided to bring the information in the STP Background Volume (BV) current to the end of the previous federal fiscal year as required by the FFCO. It provides information about changes to the LANL program for mixed waste treatment that occurred in FY97 (October 1, 1996, through September 30, 1997). This BV Update includes the following:

- updates to the inventory of covered waste in storage at the end of the previous fiscal year and projections of the inventory of covered waste expected to be placed into storage for the next five fiscal years;
- progress reports on treatment and treatment technology development;
- a report on the funding of STP-related activities;
- the status of any treatment variances being applied for; and
- a progress report on the capabilities for the treatment of mixed transuranic waste (MTRU) capabilities at the DOE Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico.

Section 2.1 of the BV Update focuses on changes to the inventory of covered waste in storage at LANL that occurred during FY97, and brings the inventory information current to the end of FY97 (in certain instances, inventory information is provided since the end of FY97, as will be described herein). Section 2.1 also contains estimates of the volume of covered waste anticipated to be placed into storage in the next five fiscal years, i.e., covered waste to be placed in the STP inventory from FY98 through FY02. Mixed waste that is expected to be treated before it becomes a covered waste under the FFCO will not be reflected in this Update.

Section 2.2 of the BV Update presents a progress report on treatment progress and treatment technology development for each treatment technology specified in the original STP. Section 2.3 discusses any anticipated alternative technology that is being evaluated for use in place of the treatment technologies or capacities identified in the STP, in particular, potential alternative commercial treatment and off-site DOE treatment capacity or technology that has become available since the end of FY96. Section 2.4 describes LANL's funding expectations for STP-related activities and funding issues that may affect the schedule. Section 2.5 discusses the status of the "No-Migration Variance Petition" that DOE had submitted for the WIPP. No other treatment variances are in

progress. Section 2.6 provides a progress report on DOE's plans regarding characterization and/or treatment capabilities for treating MTRU at WIPP.

The FFCO also requires that the Update bring the STP Compliance Plan Volume (CPV) current to the end of the previous federal fiscal year. It must describe revisions or amendments requested or granted in that FY that change the compliance dates, add or delete treatability groups, or in any other way change the schedules of the STP. The STP CPV update requirements are addressed in a separate volume, "*Annual Site Treatment Plan Update for Fiscal Year 1997, Compliance Plan Volume*" (CPV Update), which is being submitted concurrently with this volume.

2. BACKGROUND VOLUME UPDATE

2.1 Inventory Report

2.1.1 MLLW Inventory Summary

NOTE TO THE READER: As required by Section VII of the FFCO, the following section provides a MLLW inventory report that provides "estimated volume in storage at the end of the previous fiscal year [FY97]"(FFCO, Paragraph VII.B.Background Volume 1.1). Therefore, the following discussion is intentionally out-of-sync with the current STP Revisions because it reports LANL's MLLW inventory as it was 6 months before the Update was published. In particular, for this year the data in the Annual Update will be different from the Inventory provided in Rev4/5 – none of Rev 4 will be include: however most, but not all, of Rev 5 will be included. In addition, because the inventory in Rev 6 will start from the inventory in Rev 4/5, the data in the Annual Update will not be identical to the data in Rev 6.

Covered MLLW was added to and removed from the LANL covered waste inventory during FY97. Table 2-1 in this section of the Update provides a summary of the covered MLLW inventory changes that occurred during FY97, as documented in the Waste Management Database.

At the beginning of FY97, revisions incorporating the changes to the original October, 1995 CPV inventory reported in previous Updates had not yet been approved by NMED. Therefore, the CPV inventory at the end of FY96 (as reported in Table 2-1 of the FY96 Update) is used as a starting point for this Table 2-1. During FY97, one revision formally incorporating decreases in a treatability group (in LA-W928 only) was approved (Rev. 2.0; see CPV Update Section 3.1 for discussion), and another revision (Rev. 5.0; see CPV Update Section 6.2 for discussion), which incorporated all the FY95 and FY96 inventory changes reported in previous Updates, was submitted to the NMED. However, because Rev. 5.0 had not been approved as of the end of FY97, the Rev. 5.0 FY95 and FY96 inventory changes are not shown in Table 2-1.

In addition to the FY95 and FY96 inventory changes, Rev. 5.0 also included some of the FY97 additions to the covered waste inventory ("Other Changes," included in order to expedite treatment; see CPV Update Section 6.2 for discussion). However, some of the increases and decreases to the CPV inventory that occurred during FY97 were not included in Rev. 5.0.

Therefore, the FY97 covered MLLW inventory changes shown in Table 2-1 include both the FY97 changes that have been approved as part of Rev. 5.0 ("Other Changes") and the FY97 changes to the CPV inventory not included in Rev. 5.0. These FY97 changes which were not included in Rev. 5.0 are now proposed for formal incorporation into the CPV in Rev. 6.0, submitted concurrently with this Update.

In general, the increases in the LANL covered MLLW inventory during FY97 came primarily from MLLW generated during FY96 that was not treated within 12 months of

generation, thereby becoming covered waste in FY97. Decreases in the LANL covered MLLW inventory during FY97 were mainly due to treatment or recycling of LANL covered waste at on- or off-site facilities during FY97, as will be described in succeeding sections. No LANL covered waste was treated in treatability studies during FY97.

Table 2-1 of the FY96 Update is reprinted in Appendix A of this Update for informational purposes, to enable the reader to track all changes to the CPV covered waste inventory since the issuance of the original October, 1995 CPV. The reader is referred to the discussions in the associated CPV Update and in Appendix B of the current CPV for a complete picture of all CPV inventory changes.

Table 2-1. FY97 MLLW Inventory Update Summary[a]

CPV Sec.	MWIR Waste ID and Treatability Group/Category	3/96 Annual Update Volume (m^3)	FY97 Changes in Covered Waste: Revision 5 (Other Changes) (m^3)	FY97 Changes in Covered Waste: Revision 6 (3/98 FY97 Annual Update Changes)[b] (m^3)	Comments	3/98 Annual Update Volume (m^3)	Projection FY98-FY02 (m^3)
3.1.1	LA-W901 IPA Wastes	0.02	~~Decreased~~ ~~0.005~~[e-m]	Decreased 0.02	Shipped off-site for treatment at commercial facility during FY97	0.00	0.0
3.1.1	LA-W902 Scintillation Fluids	0.0038[d]		Decreased 0.0038	Shipped off-site for treatment at commercial facility during FY97	0.00	0.0
3.1.2	LA-W903 Lead Blankets	0.00				0.00	0.0
3.1.2	LA-W904 Soil with Heavy Metals	10.64	~~Decreased~~ ~~0.2082~~[e-m] ~~0.1047~~[n]	Decreased 0.62 Decreased 0.42 Decreased 8.91 Decreased 0.14	Transferred to LA-W910 (approved by NMED 9/18/97) Transferred to LA-W911 (approved by NMED 9/18/97) Shipped off-site for treatment at commercial or DOE facilities during FY97 Shipped off-site for treatment at commercial or DOE facilities during FY97	0.00	0.00
3.1.2	LA-W905 ER Soils	0.00				0.00	0.0
3.1.3	LA-W906 Aqueous Organic Liquids	5.70	~~Increased~~ ~~0.0005~~[e-m] Increased ~~4.83~~[f] 4.26[f n]	Increased 5.74	Waste that was newly generated in FY96 that became covered waste in FY97	15.70	50.0

CPV Sec	MWIR Waste ID and Treatability Group/Category	3/96 Annual Update Volume (m^3)	FY97 Changes in Covered Waste		Comments	3/98 Annual Update Volume (m^3)	Projection FY98-FY02 (m^3)
			Revision 5 (Other Changes) (m^3)	Revision 6 (3/98 FY97 Annual Update Changes)[b] (m^3)			
3.1.4	LA-W911 Organic-Contaminated Combustible Solids	33.51	Increased 1.46[f]	Increased 0.0038 Increased 0.42	Waste that was newly generated in FY96 that became covered waste in FY97 Transferred from LA-W904 (approved by NMED 9/18/97)	35.39	7.3
3.1.4	LA-W919 Organic-Contaminated Noncombustible Solids	17.29	Increased 0.95[f]	Increased 8.58 Increased |0.11	Waste that was newly generated in FY96 that became covered waste in FY97 Unused Treatability Study sample returned form off-site facility in FY97	26.93	47.6
3.1.5	LA-W912 Combustible Debris	14.10		Increased 0.32	Waste that was newly generated in FY96 that became covered waste in FY97	14.42	1.6
3.1.5	LA-W921 Activated or Inseparable Lead	8.13		Increased 1.58 Decreased 0.89 Decreased 1.72	Waste that was newly generated in FY96 that became covered waste in FY97 Shipped for off-site treatment at commercial facility during FY97 Shipped off-site for recycle at commercial facility in FY97	7.10	7.9
3.1.5	LA-W922 Noncombustible Debris	27.91		Increased 9.25 Decreased 2.915 Decreased 0.62	Waste that was newly generated in FY96 that became covered waste in FY97 Shipped for off-site treatment at commercial facility during FY97 Shipped for off-site treatment at commercial facility during FY97	33.63	46.2
3.1.6	LA-W913 Aqueous Wastes with Heavy Metals	1.65		Increased 1.02	Waste that was newly generated in FY96 that became covered waste in FY97	2.67	5.1
3.1.6	LA-W914 Corrosive Solutions	0.81		Increased 0.04	Waste that was newly generated in FY96 that became covered waste in FY97	0.85	0.2

FY Annual STP Update Format
Background Volume
March 31, 1998

CPV Sec.	MWIR Waste ID and Treatability Group/Category	3/96 Annual Update Volume (m^3)	FY97 Changes in Covered Waste		Comments	3/98 Annual Update Volume (m^3)	Projection FY98-FY02 (m^3)
			Revision 5 (Other Changes) (m^3)	Revision 6 (3/98 FY97 Annual Update Changes)[b] (m^3)			
3.1.6	LA-W915 Aqueous Cyanides, Nitrates, Chromates, and Arsenates	0.17				0.17	0.0
3.1.7	LA-W916 Water-Reactive Wastes	6.06		Increased 0.68	Waste that was newly generated in FY96 that became covered waste in FY97	6.74	3.4
3.1.8	LA-W917 Compressed Gases Requiring Scrubbing	0.35				0.35	0.0
3.1.9	LA-W918 Compressed Gases Requiring Oxidation	0.09		Increased 0.0002	Waste that was newly generated in FY96 that became covered waste in FY97	0.09	0.001
3.1.10	LA-W920 Elemental Mercury	0.52		Increased 0.12	Waste that was newly generated in FY96 that became covered waste in FY97	0.64	0.6
3.2.1	LA-W907 Halogenated Organic Liquids	17.07		Increased 0.15 Decreased 0.0076	Waste that was newly generated in FY96 that became covered waste in FY97 Shipped for off-site treatment at commercial facility during FY97	17.21	0.8
3.2.1	LA-W908 Nonhalogenated Organic Liquids	17.25		Increased 0.09 Increased 0.076 Decreased 0.49 Decreased 0.11	Waste that was newly generated in FY96 that became covered waste in FY97 Correction to volume reported in original STP inventory which was in error Shipped for off-site treatment at commercial facility during FY97 Correction to volume reported in original STP inventory which was in error	16.82	0.4

FY Annual STP Update Format
Background Volume
March 31, 1998

CPV Sec.	MWIR Waste ID and Treatability Group/Category	3/96 Annual Update Volume (m^3)	FY97 Changes in Covered Waste		Comments	3/98 Annual Update Volume (m^3)	Projection FY98-FY02 (m^3)
			Revision 5 (Other Changes) (m^3)	Revision 6 (3/98 FY97 Annual Update Changes)[6] (m^3)			
3.2.1	LA-W909 Bulk Oils	6.03		Increased 0.05 Increased 0.47 Decreased 2.22	Waste that was newly generated in FY96 that became covered waste in FY97 Correction to volume reported in original STP inventory which was in error Shipped for off-site treatment at commercial facility during FY97	4.33	0.2
3.2.1	LA-W910 PCB Wastes with RCRA Components	0.74		Increased 1.39 Increased 0.62	Waste that was newly generated in FY96 that became covered waste in FY97 Transferred from LA-W904 (Approved by NMED 9/18/97)	2.75	0.4
3.2.1	LA-W923 Liquid and Solid Oxidizers	0.43		Increased 0.795	Waste that was newly generated in FY96 that became covered waste in FY97	1.23	4.0
3.3	LA-W924 Lead Wastes - TBD	40.16				40.16	0.0
3.3	LA-W925 Mercury Wastes - TBD	19.82		Increased 0.67	Waste that was newly generated in FY96 that became covered waste in FY97	20.49	3.4
3.3	LA-W926 Compressed Gases – TBD	1.25				1.25	0.0
3.3	LA-W927 Biochemical Laboratory Wastes	1.34				1.34	0.0
3.3	LA-W928 Dewatered Treatment Sludge	268.17		Decreased 255.46	Approved by NMED 9/18/97 as Rev. 2.0 to the STP	12.71	0.0

FY Annual STP Update Format
Background Volume
March 31, 1998

CPV Sec.	MWIR Waste ID and Treatability Group/Category	3/96 Annual Update Volume (m^3)	FY97 Changes in Covered Waste: Revision 5 (Other Changes) (m^3)	FY97 Changes in Covered Waste: Revision 6 (3/98 FY97 Annual Update Changes)[b] (m^3)	Comments	3/98 Annual Update Volume (m^3)	Projection FY98-FY02 (m^3)
3.4.1	LA-W930 Lead for Surface Decontamination	65.31	~~Decreased 8.34~~[g m]	Increased 12.06	Waste that was newly generated in FY96 that became covered waste in FY97	69.38	60.3
				Decreased 0.32	Shipped for decontamination and recycle at on-site facility in F Y97		
				Decreased 0.97	Shipped for decontamination and recycle at on-site facility in F Y97		
				Decreased 1.04	Shipped for decontamination and recycle at on-site facility in F Y97		
				Decreased 5.66	Shipped for decontamination and recycle at on-site facility in F Y97		
3.4.2	LA-W929 Nonradioactive or Suspect Waste Items to be Surveyed	14.24	~~Decreased 0.26~~[h m]	Decreased 0.0076	Shipped for off-site treatment at commercial facility during FY97	14.23	0.0
None[i]	LA-W931 Lead Requiring Sorting	5.20		Increased 0.64	Waste that was newly generated in FY96 that became covered waste in FY97	1.06	3.2
				Decreased 4.78	Shipped for off-site treatment at commercial facility during FY97		
				Increased 0.02	Correction to Original STP Inventory as discussed in Revision 6.0		
None[j]	LA-W932 Explosives	0.00				0.00	0.0
None[j]	LA-W933 Lab Packs	0.13		Increased 0.003	Waste that was newly generated in FY96 that became covered waste in FY97	0.13	0.02

CPV Sec	MWIR Waste ID and Treatability Group/Category	3/96 Annual Update Volume (m^3)	FY97 Changes in Covered Waste		Comments	3/98 Annual Update Volume (m^3)	Projection FY98-FY02 (m^3)
			Revision 5 (Other Changes) (m^3)	Revision 6 (3/98 FY97 Annual Update Changes)[b] (m^3)			
None	IPA Waste	0.00		Increased 0.0005[k] Decreased 0.0005[k]	Omitted from original STP inventory as discussed in Rev. 6.0 Shipped for off-site treatment at commercial facility during FY97	0.00	0.0
None[i]	Missing/ nonexistent/ TBV category	0.00	~~Increased 0.2082[e] 0.1047[m n]~~ ~~Increased 0.26[m]~~ ~~Increased 8.34[m]~~			0.00	Not Applicable

NOTES TO TABLE

[a] The covered waste volumes reported in Appendix B of the proposed Revision 6.0 include the volume changes in Revisions 4.0 and 5.0, approved by NMED in FY98 (December 29, 1997). Therefore, the volume changes in Revision 4.0 and 5.0 are not reflected in the FY97 STP *Annual Update* and are not included in this table. Because of this, the volumes in this table cannot be compared to the volumes reported in Appendix B. Also refer to *Note to Reader* in Section 2.1.1.

[b] These changes are the additional changes in FY 97 that were not previously reported in Rev. 5.0.

[c] One item from treatability group LA-W901 (*IPA wastes)* transferred to LA-W906 (*Aqueous Organic Liquids*) treatability group in Rev. 5.0 (also see footnote m).

[d] The final FY96 volume for most treatability groups is reported to two decimal places for consistency with the original STP inventory. The final FY96 LA-W902 volume is given as $0.0038m^3$ (i.e., reported to four decimal places) in order to accurately report the presence of one small-volume waste item in this treatability group remaining in the LANL inventory at the end of FY96. This item was shipped off-site on December 18, 1996.

[e] Items of LA-W904 waste transferred to the category of *Missing/Nonexistent/TBV* in Rev. 5.0 (also see footnotes m and n).

[f] These are wastes that were generated in FY96 and became covered waste in FY97; they were included in the Revision 5 request to facilitate expedited treatment and disposal of these wastes.

[g] Items of LA-W930 waste transferred to the category of *Missing/Nonexistent/TBV* in Rev. 5.0 (also see footnote m).

[h] Items of LA-W929 waste transferred to the category of *Missing/Nonexistent/TBV* in Rev. 5.0 (also see footnote m).

[i] This treatability group (LA-W931, *Lead Requiring Sorting*) is not listed in the *Compliance Plan Volume*; however, it is discussed in section 3.4.3 of the *Background Volume*.

[j] The treatability groups LA-W932, *Explosives*, and LA-W933, *Lab Packs*, were not part of the original STP. They were proposed for addition in LANL's February 28, 1997 revision request. This revision, Revision 4, was approved by NMED on December 29, 1997.

[k] As discussed in our letter dated January 9, 1997, this item was covered waste that was inadvertently omitted from the original 10/95 STP/CPV inventory; this item may not have had a treatment option if it was not shipped with the IPA waste items in LA-W901.

[l] The treatability category *Missing/Nonexistent/TBV* was not part of the original STP. It was proposed for addition in LANL's March 31, 1997 revision request. This revision, Revision 5, was approved by NMED on December 29, 1997.

[m] These changes were reflected in Appendix B of Revision 5.0 in the column labeled "Revision 5 (Other Changes)"; however, these changes are FY98 changes and are not included in this FY97 STP *Annual Update*. They are shown in this column as struck-out to enable the reader to compare this column to the same column in Appendix B of Revision 5.0 for informational purposes only.

[n] These corrections arise due to an error in Revision 5.0 and are discussed in the proposed Revision 6.0.

2.1.2 MTRU Inventory Summary

The MTRU covered waste inventory at LANL is summarized in Table 2-2. This table presents the volume of MTRU covered waste for each treatability group, along with an estimate of projected future generation levels for the next 5 calendar years.

As indicated in Table 2-2, the covered MTRU inventory increased by 6.86 m^3 during FY97, corresponding to an overall MTRU increase of about 0.1% from FY96.

Table 2-2. FY97 TRU Inventory Update Summary

Waste Treatability Group	EPA Code	Estimated Volume (m3) End of FY 97	Estimated Volume (m3) End of CY 97	Projected Volume (m3) CY97-CY01
Solidified Inorganic and Organic Solids	D006,D007,D008, D019,D021,D039, F001,F002,F003	1,601.00	1,601.00	20.86
Metallic Waste	D004,D006,D007, D008,D009,D019, D040	1,685.51	1,685.51	118.60
Glass Waste	D008,D009,D019, D040	89.86	89.96	0.00
Non-Combustible Waste	D008	947.09	947.09	0.00
Combined Combustible and Non-Combustible Waste	D008,F001,F002	450.24	450.24	166.65
Combustible Waste	D007,D008,D019, D040,F001,F002, U080	1052.62	1052.62	76.90
Absorbed Organic		2.70	2.70	0.00
Cemented Process Sludge	D007,D008,D009, D019,F001,F002, F005	156.57	160.73	83.00
Leaded Glovebox Gloves	D008	3.12	3.33	2.10
Total		**5,988.70**	**5993.28**	**468.11**

The largest single waste category increase for the FY97 period was a 2.71 m^3 increase in Solidified Inorganic and Organic Sludges. Leaded Glovebox Gloves increased by 1.66 m^3, and both the Metallic Waste and Combined Combustible and Non-Combustible Waste categories increased by 1.04 m^3. Finally, the Glass Waste and Combustible Waste categories increased by 0.21 m^3. Cemented Process Sludge did not increase during the FY97 period.

Calendar-Year versus Fiscal-Year Reporting

As explained in the FY96 Update, some inconsistencies in waste volumes reported here and in future STP Updates will continue to exist because of the variations in update cycles (reporting periods) for the Update versus other documents reporting mixed waste inventories published by the DOE (e.g., the MWIR and BIR). Because the STP Update requires reporting of covered waste only, the volumes listed herein are of covered MTRU in storage as of the previous fiscal year. However, covered MTRU volumes are also reported on a calendar-year (CY) basis, and most of the reports that LANL regularly provides to DOE and the public presents MTRU/TRU waste volumes on a CY basis.

2.2 Progress Report on Treatment and Technology Development

This section of the BV Update reports on LANL's progress during FY97 in on- and off-site treatment of covered waste (BV Update Section 2.2.1), and in development of treatment technologies specified in the FFCO (BV Update Section 2.2.2). Also addressed briefly in this section is a description of the progress or status of other activities scheduled in the STP.

2.2.1 Treatment During FY97

Off-site Treatment

During FY97, covered mixed waste streams were shipped to off-site treatment facilities such as Diversified Scientific Services, Inc. (DSSI) in Tennessee and Envirocare of Utah for treatment and disposal. Table 2-3 is a summary of LANL's off-site shipments of covered MLLW for treatment in FY97.

Off-Site Recycling

During FY97, covered MLLW waste was shipped to an off-site recycling facility, Scientific Ecology Group in Tennessee. Two covered MLLW items were sent off-site for recycling during FY97, as indicated in Table 2-4 (see Section 2.3.3 for additional discussion of recycling activities).

On-Site Treatment

No LANL covered MLLW was treated on-site during FY97.

On-Site Recycling

In accordance with CPV requirements in Section 3.4.1, "*Lead Decontamination*," LANL completed on-site decontamination of the lead in the original LAW-930-0 inventory that

was amenable to decontamination in the on-site lead decontamination trailer (see Section 2.3.3 for additional discussion of recycling activities).

Table 2-3. FY97 STP MLLW Off-site Shipments for Treatment

Date Shipped	Received Date	Letter Date to NMED	Destination	Waste	CPV Volume Treated (m^3)	Items	CPV Section.
12/9/96	12/11/96	12/24/96	Envirocare, UT	LA-W921 Activated and Inseparable lead	0.89	5	3.1.5
12/9/96	12/11/96	12/24/96	Envirocare, UT	LA-W922 Noncombustible debris	2.915	14	3.1.5
12/9/96	12/11/96	12/24/96	Envirocare, UT	LA-W931 Lead Requiring Sorting	4.78	23	None
12/18/96	12/20/96	1/9/97, 1/31/97	DSSI, TN	LA-W901 IPA Wastes	0.02	7	3.1.1
12/18/96	12/20/96	1/9/97, 1/31/97	DSSI, TN	LA-W902 Scintillation Fluids	0.0038	1	3.1.1
12/18/97	12/20/97	1/9/97	DSSI. TN	LA-W907 Halogenated Organic Liquid	0.0076	3	3.2.1
12/18/96	12/20/96	1/9/97	DSSI, TN	LA-W908 non-halogenated organic liquids	0.49	3	3.2.1
12/18/96	12/20/96	1/9/97	DSSI, TN.	LA-W909 Bulk Oils	2.22	23	3.2.1
12/18/96	12/20/96	1/9/97	DSSI, TN	LA-W929 Non rad and suspect rad items	0.0076	2	3.4.2
12/18/96	12/20/96	1/9/97	DSSI.TN	No MWIR ID IPA Waste[a]	0.00 [0.0005][a]	1	None
6/30/97	7/2/97	7/30/97	Envirocare, UT	LA-W922 Non-combustible Debris	0.62	3	3.1.5
8/5/97	8/7/97	9/18/97	Envirocare, UT	LA-W904 Soil with Heavy Metals	8.91	46	3.1.2
9/29/97	10/1/97	11/3/97	Envirocare, UT	LA-W904 Soils with Heavy Metals	0.14	2	3.1.2

[a] As discussed in our letter dated January 9, 1997, this item was covered waste that was inadvertently omitted from the original 10/95 STP/CPV inventory; this item may not have had a treatment option if it was not shipped with the IPA waste items in LA-W901.

Table 2-4. FY97 STP MLLW Off-site Shipments for Recycling

Date Shipped	Shipment Received Date	Letter Date to NMED	Destination	Waste	CPV Volume Treated (m^3)	Items	CPV Sec.
9/24/97	9/26/97	11/26/97	Scientific Ecology Group, TN	LA-W921 Activated or Inseparable Lead	1.72	2	3.1.5

Treatability Studies

During FY97, LANL did not conduct any treatability studies on its STP covered waste, either on-site or off-site. It is LANL's intent to continue to participate in treatability studies that provide valuable research data to the commercial and DOE mixed waste treatment industry.

LANL is continuing to pursue treatability studies at off-site testing facilities, as follows:

- International Technology (IT) Corporation Development Laboratory and the Environmental Technology Development Center (located in Tennessee) are licensed to conduct treatability studies on radioactive and mixed wastes.
- Colorado Minerals Research Institute (CMRI), a research laboratory in Colorado, is participating in a DOE-sponsored demonstration project for stabilizing radioactively-contaminated mercury. The project combines a proven method with an economically viable mixing technology.

LANL will minimize generation of mixed waste during treatability studies as much as possible. If mixed waste is generated from a treatability study, LANL will manage such waste as a newly generated mixed waste as defined by the FFCO.

2.2.2 Other Types of Mixed Waste Activities

During FY97, efforts continued to characterize additional MLLW, some of which was covered waste under the FFCO/STP. This characterization included full RCRA and radiological characterization at an offsite analytical laboratory.

Sorting, Surveying and Decontamination (SSD)

The SSD activity is described in Section 3.4.2, *Sorting, Surveying and Decontamination*, in the Compliance Plan Volume. The STP originally required that DOE and UC *"complete* [a] *survey"* (of the 1250 *"nonradioactive or suspect waste items to be surveyed"*) by 10/30/96. The SSD survey consisted originally of an on-site field operation to survey covered waste suspect of radioactive contamination to determine definitively whether it is radioactively contaminated, using equipment and staffing provided by another DOE site, namely the Grand Junction Project Office (GJPO). During FY97, SSD field activities were completed, and 1,237 items originally belonging to treatability group LA-W929, *"Nonradioactive or suspect items to be surveyed,"* were

proposed to be transferred to new treatability groups or categories for treatment or other management through the revision process. The remaining 13 items were treated at off-site commercial facilities or an on-site treatability study.

GJPO's field procedure included visual inspection; radiological surveys using field survey instruments; repackaging of items into new outer containers if necessary; and the taking of confirmatory samples for radiological analysis off-site. GJPO's field activities were conducted on approximately 1049 of the 1250 LA-W929-0 waste items (i.e., subgroup) prior to October 30, 1996. STP Amendment 1.0 and Revision 3.0 provided for RCRA sampling to be performed on subgroup 2 of the SSD items in addition to the radiological field survey/sampling, and for visual inspection and record reviews of subgroup 3 of these SSD items. This fieldwork was completed for SSD subgroups 2 and 3 on January 28, 1997.

Assignments to new treatability groups were proposed for all items in SSD subgroups 1, 2 and 3 by reviewing and verifying (to the extent possible) all data available at that time. Revision 4.0 was requested during FY97 to complete these transfers to new treatability groups; however, it was not approved until after the end of FY97 (see CPV Update Section 6.1 for additional discussion).

2.2.3 Ongoing Treatment Technology Development

During FY97, the availability of commercial and federal facility off-site treatment and disposal capacity for MLLW continued to increase, making onsite treatment technology development less crucial to the timely reduction of LANL's STP covered waste inventory. In general, DOE is pursuing development of mixed waste treatment facilities only when existing capabilities are unavailable or inadequate for DOE wastes from across the complex.

Technology development at LANL and other sites for the mixed waste streams at LANL was originally coordinated by the DOE/AL Mixed Waste Treatment Plan (MWTP), as discussed in the FY96 Update. The MWTP included recommendations for treating most treatability groups at LANL as well as other DOE/AL sites.

As a result of DOE's increasing reliance on commercial treatment/disposal for mixed wastes, nearly all funding for onsite technology development has been reprioritized to support off-site disposal of mixed wastes. DOE treatment technology development initiatives in the future will generally be limited to specific technologies or technology adaptations in response to specific needs that cannot be addressed through commercial facilities. Examples of such initiatives are identified in Section 2.3.2.

As discussed in Section 6.4 of the CPV Update, LANL will be submitting a revision request to remove the Activities and Compliance Dates associated with development of on-site treatment skids from the STP.

2.3 Anticipated Alternative Treatment Technologies Being Evaluated

LANL continues to monitor the development of other potential treatment technologies that may become available in the future (see Appendix B). Some of these technologies are being developed at LANL and at other DOE sites in the nuclear complex. Numerous other commercially developed treatment processes exist which have not been demonstrated on mixed wastes. Some processes for which information is being collected are listed in Appendix B.

2.3.1 Off-Site Commercial Treatment Facilities

DOE and UC plan to continue shipping STP covered waste streams to Envirocare of Utah, Scientific Ecology Group, and Diversified Scientific Services in the future. The following off-site commercial facilities are also being considered for near-term use:

- Perma-Fix of Florida is a RCRA permitted facility with a Radioactive Materials License for processing scintillation cocktail vials and other mixed waste fluids for blending and shipment to an energy recovery facility. Perma-Fix is also in the process of expanding their permit to include stabilization technologies.
- Waste Control Specialists (WCS) in Texas operates a fully permitted and licensed treatment facility for mixed low-level waste. WCS can perform stabilization of waste forms for the purpose of meeting Land Disposal Restriction treatment standards. WCS may also conduct waste compaction, consolidation, and repackaging activities.

2.3.2 Off-Site DOE Treatment Facilities

LANL also continues to evaluate off-site DOE-operated treatment facilities for their appropriateness to treat LANL STP waste. In the past, LANL has utilized the Waste Experimental Reduction Facility (WERF) incinerator in Idaho for destruction of organic-based liquids. The WERF incinerator is also being considered for destruction of combustible solid waste in the STP. Three DOE facilities are also being evaluated for possible near-term or long-term use, as discussed below.

Oak Ridge TSCA Incinerator

The TSCA incinerator began operation in 1990 treating liquid wastes contaminated with organic compounds regulated under RCRA and/or Toxic Substance Control Act (TSCA) and radionuclides regulated under the Atomic Energy Act. In FY97, LANL submitted an application to Oak Ridge for accessing the incinerator for STP covered PCB wastes (LA-W910). The approval of the application is still pending.

Consolidated Incineration Facility (CIF)

The Consolidated Incineration Facility at the Savannah River Site is being evaluated for treating certain liquid organic waste streams at LANL. At the present time, the CIF is not permitted to accept waste regulated under RCRA from facilities outside the State of South Carolina.

Advanced Mixed Waste Treatment Project (AMWTP)

The Advanced Mixed Waste Treatment Project is at the DOE Idaho National Engineering and Environmental Laboratory (INEEL) that is anticipated to be available to treat mixed waste from the DOE Complex. A RCRA Permit application has already been submitted to the State of Idaho, and DOE will make a decision regarding construction of the facility next year. The AMWTF is described in the permit application to include controlled air incineration, waste vitrification, high force compaction, macroencapsulation, and mercury amalgamation. This facility would initially be prioritized for the INEEL inventory of mixed waste, but an option to manage other DOE wastes is being formally considered as part of the development program.

Other DOE off-site treatment facilities will be considered in the future as they become available.

2.3.3 Recycling or Other Options

Recycling has been identified by the Environmental Protection Agency as a preferred alternative to treatment and disposal. In FY97, DOE and UC utilized the SEG facility in Tennessee for recycling of lead and other metal items covered under the STP (this was the 9/24/97 shipment listed in Table 2-4). SEG can perform surface decontamination of various lead forms (including irregular shapes) and operates a fully permitted radioactive lead smelter. Other off-site recycling facilities will be considered in the future as options become available.

In addition, LANL successfully completed the decontamination of 6.59 m3 of surface-contaminated lead, LA-W930, onsite during FY97.

Recycling chemicals (such as acids, caustics, solvents, gases, or other materials) as ingredients or feedstocks to processes or as substitutes for commercial products can offer an acceptable alternative to treatment and disposal. The Chemical Exchange Assistance Program (CHEAPER) at LANL recycles chemicals from various organizations, including areas where radioactive materials operations are conducted. Working closely with the CHEAPER program, many chemicals in the current STP inventory could be identified for recycling if this option became more available in LANL's STP.

2.4 Funding

Funding to implement the LANL Site Treatment Plan for mixed waste during FY97 was sufficient to meet all compliance dates as required by the STP issued on October 4, 1995. As stated in the FY96 Annual Update to the STP, funding is no longer available for development of mobile treatment units at LANL, but funding was provided during FY97 for shipment of mixed waste offsite for treatment and disposal at DOE and commercial facilities. Funding during FY98 is also sufficient to meet all compliance dates established in the STP for FY98, and projected funding for FY99 should again allow all compliance dates in the STP to be met during FY99. Should funding reductions occur that would affect STP compliance dates, the DOE and University of California (UC) will notify the NMED to amend compliance schedules and activities accordingly.

The DOE Assistant Secretary for Environmental Management has initiated a long-range plan for its cleanup and waste management activities, with a goal of accelerating clean-up progress as much as possible before 2006. The draft plan, now called *Accelerating Cleanup: Defining the Path to Closure*, includes sections for the LANL site that address MLLW and TRU wastes that are currently in storage (legacy waste), as well as those projected to be generated (newly-generated waste) through 2070. Current funding targets for waste management in the draft *LANL Accelerating Cleanup: Defining the Path to Closure Plan* should allow LANL to continue to meet all compliance dates in the STP, but assume that MTRU waste is not required to be treated to meet LDR before shipment to WIPP for disposal.

Beginning in FY99, all newly-generated MLLW is planned to be treated and disposed within one year. All MLLW placed into storage before FY99 is planned to be treated and disposed before the end of FY03.

Schedules for TRU waste disposal in the LANL Accelerating Cleanup, Defining the Path to Closure Plan have slipped since they were described in the FY96 Annual Update. The LANL *Accelerating Cleanup, Defining the Path to Closure Plan* now assumes that TRU waste that exceeds the thermal wattage limit for transportation of the waste will have to be repackaged to achieve the thermal wattage limit before it is characterized, certified to meet WIPP Waste Acceptance Criteria, and shipped to WIPP. (Previously the plan assumed that a technological solution would be found so that repackaging was not required.) Since a technological solution is not presently available, the DOE guidance was to assume that repackaging would be used to meet the thermal wattage limits, since that is currently the only available means of achieving the thermal wattage limits. Repackaging greatly increases the cost of characterization and certification of the waste, and delays completion of shipment to WIPP for disposal of all LANL TRU waste by about ten years.

Beginning in FY99, newly-generated TRU waste that does not require repackaging to achieve thermal wattage limits for transportation will be shipped for disposal at WIPP within one year of generation (assuming that the WIPP site opens as scheduled and has received its hazardous waste permit from the NMED.) Newly-generated TRU waste that must be repackaged to achieve thermal wattage limits for transportation will be shipped

for disposal at WIPP by the end of FY02. Beginning in FY03, all newly generated TRU waste is planned to be shipped for disposal at the WIPP site within one year of generation.

All TRU waste placed into storage before FY99 is planned to be repackaged if needed to meet thermal wattage limits for transportation, characterized, certified to meet WIPP Waste Acceptance Criteria, and shipped to the WIPP for disposal before the end of FY15. Current funding levels in the draft LANL Accelerating Cleanup, Defining the Path to Closure Plan assume that TRU waste is not required to be treated to meet LDR before shipment to WIPP for disposal.

2.5 Treatment Variances

The RCRA allows certain case-by-case variances of LDR standards. Variances that may be sought under the RCRA relate to requests for substitution of an alternative treatment technology in place of the LDR-required treatment technology. This section discusses any potential treatment variances related to LANL's covered waste, as described below.

2.5.1 WIPP No-Migration Variance Petition

The WIPP is a DOE facility being developed near Carlsbad, New Mexico, as a planned repository for the TRU waste that was generated by the nation's defense-related activities. Some of the TRU waste contains hazardous waste constituents regulated under the RCRA.

The WIPP repository is considered to be a deep geologic repository rather than a shallow landfill. It is wholly sited 2,100 ft below the land surface in a salt bed. Because salt has the advantageous characteristic of slow plastic deformation, it is predicted that the salt will entomb the waste and seal it from the human environment, making potential release of hazardous constituents a low-probability event.

The DOE Carlsbad Area Office (DOE/CAO) submitted a draft No-Migration Variance Petition to the EPA in May 1995. The EPA reviewed the draft and submitted informal comments to the DOE/CAO on January 23, 1996. The DOE/CAO submitted the final No-Migration Variance Petition to the EPA in June 1996.

As a result of the Land Withdrawal Act Amendments of 1996 (LWAA) (PL 104-201, Section 3188) EPA has terminated its review of the No-Migration Variance Petition (NMWP), and the NMVP requirement has been removed. In a letter to George Dials, CAO Manager, dated December 29, 1997, EPA stated that the LWAA exempts waste designated by the Secretary of Energy for disposal at WIPP from RCRA's LDRs.

On October 29, 1996, DOE submitted its Compliance Certification Application (CCA) to EPA. The CCA is intended to demonstrate to EPA that WIPP meets the requirements of 40 CFR 191 and 40 CFR 194. On October 23, 1997, EPA announced

its proposed decision to issue a certification of compliance, subject to a number of specified conditions and to a public comment period of 120 days (7).

2.5.2 Other Treatment Variance(s)

No treatment variances were requested or granted in FY97.

2.6 WIPP Facility Capabilities

As discussed above, the DOE is planning to dispose of its defense TRU waste, both mixed and nonhazardous, in its deep geologic depository at the WIPP near Carlsbad, New Mexico. This facility is planned to be a receiving and disposal facility, without the capability of routinely opening and repackaging waste. TRU waste will already be containerized when received at the WIPP facility. The WIPP facility is not a generator of TRU waste, and therefore will receive all of the waste in shipments from off-site.

2.6.1 Characterization Capabilities at WIPP

No capabilities for characterization of TRU waste or hazardous waste constituents regulated by the RCRA were developed or are planned to be developed at the WIPP facility.

2.6.2 MTRU Treatment Capabilities and Plans

No capabilities for treatment of MTRU to meet the LDR standards were developed or are planned to be developed at the WIPP facility. As described above, the LWAA exempted wastes designated by the Secretary of Energy of disposal at the WIPP from this requirement.

Appendix A

Reported Inventories 1995-1996

Appendix A – Reported Inventories, 1995 – 1996 (from Table 2-1, LANL FY96 Annual Update)

CPV Sec.	MWIR Waste ID and Treatability Group	CPV Vol. (m^3)	FY95 Changes Covered Waste (m^3)[a]	Explanation for FY95 Change	Covered Vol. End of FY95 (m^3)	FY96 Changes Covered Waste (m^3)[b]	Comments	Covered Vol. End of FY96 (m^3)	Projection FY97-FY01 (m^3)
3.1.1	LA-W901 IPA Wastes	15.89	NC		15.89	Increased 4.07[d] Decreased 19.98	Waste volume incorrectly reported in original STP inventory Shipped off-site for treatment at commercial or DOE facilities during FY96	0.02	0.0
3.1.1	LA-W902 Scintillation Fluids	2.47	Decreased 2.24	Commercially treated in FY95	0.23	Increased 0.13[d] Decreased 0.36[d]	Waste volume incorrectly reported in original STP inventory Shipped off-site for treatment at commercial or DOE facilities during FY96	0.0038[g]	0.0
3.1.2	LA-W903 Lead Blankets	0.74	NC		0.74	Decreased 0.74	Shipped off-site for treatment at commercial facility during FY96	0.00	0.0
3.1.2	LA-W904 Soil with Heavy Metals	10.53	NC		10.53	Increased 0.11	Waste that was newly generated in FY95 that became covered waste in FY96	10.64	0.5
3.1.2	LA-W905 ER Soils	39.32	NC		39.32	Decreased 39.32	Shipped off-site for treatment or disposal at commercial facility during FY96	0.00	0.0
3.1.3	LA-W906 Aqueous Organic Liquids	1.65	Increased 0.43	Inadvertently omitted from STP	2.08	Increased 3.62	Waste that was newly generated in FY95 that became covered waste in FY96	5.70	18.1
3.1.4	LA-W911 Organic-Contaminated Combustible Solids	28.32	Decreased 0.11 Increased 0.17	Treated in treat-ability study in FY95 Inadvertently omitted from STP	28.38	Increased 5.24 Decreased 0.11	Waste that was newly generated in FY95 that became covered waste in FY96 Shipped for treatment in on-site treatability study during FY96	33.51	26.2
3.1.4	LA-W919 Organic-Contaminated Noncombustible Solids	7.82	Decreased 0.11 Increased 0.001	Treated in treat-ability study in FY95 Inadvertently omitted from STP	7.71	Increased 9.58	Waste that was newly generated in FY95 that became covered waste in FY96	17.29	47.9
3.1.5	LA-W912 Combustible Debris	13.82	NC		13.82	Increased 0.28	Waste that was newly generated in FY95 that became covered waste in FY96	14.10	1.4
3.1.5	LA-W921 Activated or Inseparable Lead	15.60	Decreased 7.42 Increased 10.11	Decontaminated and released in FY95 Received from LD200 effort	18.29	Increased 2.29 Decreased 12.45	Waste that was newly generated in FY95 that became covered waste in FY96 Shipped for off-site treatment at commercial facility during FY96	8.13	11.5

CPV Sec.	MWIR Waste ID and Treatability Group	CPV Vol. (m^3)	FY95 Changes Covered Waste (m^3)[a]	Explanation for FY95 Change	Covered Vol. End of FY95 (m^3)	FY96 Changes Covered Waste (m^3)[b]	Comments	Covered Vol. End of FY96 (m^3)	Projection FY97-FY01 (m^3)
3.1.5	LA-W922 Noncombustible Debris	5.62	Decreased 0.0002 Increased 1.25	Treated in treat-ability study in FY95 Inadvertently omitted from STP	6.87	Increased 21.04	Waste that was newly generated in FY95 that became covered waste in FY96	27.91	105.2
3.1.6	LA-W913 Aqueous Wastes with Heavy Metals	1.85	NC		1.85	Increased 0.15 Decreased 0.030 Decreased 0.32	Waste that was newly generated in FY95 that became covered waste in FY96 Shipped for treatment in on-site treatability study during FY95 Shipped for treatment in on-site treatability study during FY96	1.65	0.8
3.1.6	LA-W914 Corrosive Solutions	1.36	Increased 0.04	Inadvertently omitted from STP	1.40	Increased 0.08 Decreased 0.67	Waste that was newly generated in FY95 that became covered waste in FY96 Shipped for treatment in on-site treatability study during FY96	0.81	0.4
3.1.6	LA-W915 Aqueous Cyanides, Nitrates, Chromates, and Arsenates	0.13	Decreased 0.0003 Increased 0.02	Treated in treat-ability study in FY95 Inadvertently omitted from STP	0.15	Increased 0.02 Decreased 0.0002 Decreased 0.0031	Waste that was newly generated in FY95 that became covered waste in FY96 Shipped for treatment in on-site treatability study during FY95 Shipped for treatment in on-site treatability study during FY96	0.17	0.1
3.1.7	LA-W916 Water-Reactive Wastes	6.03	Increased 0.02	Inadvertently omitted from STP	6.05	Increased 0.01	Waste that was newly generated in FY95 that became covered waste in FY96	6.06	0.05
3.1.8	LA-W917 Compressed Gases Requiring Scrubbing	0.35	NC		0.35	NC		0.35	0.0
3.1.9	LA-W918 Compressed Gases Requiring Oxidation	0.08	NC		0.08	Increased 0.01	Waste that was newly generated in FY95 that became covered waste in FY96	0.09	0.0
3.1.10	LA-W920 Elemental Mercury	0.50	NC		0.50	Increased 0.02	Waste that was newly generated in FY95 that became covered waste in FY96	0.52	0.1

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CPV Sec.	MWIR Waste ID and Treatability Group	CPV Vol. (m^3)	FY95 Changes Covered Waste (m^3)[a]	Explanation for FY95 Change	Covered Vol. End of FY95 (m^3)	FY96 Changes Covered Waste (m^3)[b]	Comments	Covered Vol. End of FY96 (m^3)	Projection FY97-FY01 (m^3)
3.2.1	LA-W907 Halogenated Organic Liquids	16.58	Increased 0.04	Inadvertently omitted from STP	16.62	Increased 0.45 Decreased 0.0025	Waste that was newly generated in FY95 that became covered waste in FY96 Shipped for treatment in on-site treatability study during FY96	17.07	2.3
3.2.1	LA-W908 Nonhalogenated Organic Liquids	14.34	Increased 0.08	Inadvertently omitted from STP	14.42	Increased 2.83	Waste that was newly generated in FY95 that became covered waste in FY96	17.25	14.2
3.2.1	LA-W909 Bulk Oils	3.75	NC		3.75	Increased 2.28	Waste that was newly generated in FY95 that became covered waste in FY96	6.03	11.4
3.2.1	LA-W910 PCB Wastes with RCRA Components	0.74	NC		0.74	NC		0.74	0.0
3.2.1	LA-W923 Inorganic Solid Oxidizers	0.20	Increased 0.32	Inadvertently omitted from STP	0.52	Decreased 0.087	Shipped for treatment in off-site treatability study during FY96	0.43	0.2
3.3	LA-W924 Lead Wastes – TBD	51.44	Decreased 11.28	Decontaminated and released in FY95	40.16	NC		40.16	0.0
3.3	LA-W925 Mercury Wastes - TBD	18.30	NC		18.30	Increased 1.52	Waste that was newly generated in FY95 that became covered waste in FY96	19.82	7.6
3.3	LA-W926 Compressed Gases - TBD	1.25	NC		1.25	NC		1.25	0.0
3.3	LA-W927 Biochemical Laboratory Wastes	1.34	NC		1.34	NC		1.34	0.0
3.3	LA-W928 Dewatered Treatment Sludge	268.17	NC		268.17	NC		268.17	0.0
3.4.1	LA-W930 Lead for Surface Decontamination	56.20	Decreased 14.64 Increased 22.50	Decontaminated and released in FY95 Received from LD200 effort	64.06	Increased 1.25	Waste that was newly generated in FY95 that became covered waste in FY96	65.31	6.3

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CPV Sec.	MWIR Waste ID and Treatability Group	CPV Vol. (m^3)	FY95 Changes Covered Waste (m^3)[a]	Explanation for FY95 Change	Covered Vol. End of FY95 (m^3)	FY96 Changes Covered Waste (m^3)[b]	Comments	Covered Vol. End of FY96 (m^3)	Projection FY97-FY01 (m^3)
3.4.2	LA-W929 Nonradioactive or Suspect Waste Items to be Surveyed	14.24	Decreased 0.002 Increased 0.00002	Decontaminated and released in FY95 Inadvertently omitted from STP	14.24	Decreased 0.00094 Decreased 0.0029	Shipped for treatment in on-site treatability study during FY95 Shipped for treatment in on-site treatability study during FY96	14.24	0.0
None[d]	LA-W931 Lead Requiring Sorting	9.97	Decreased 4.58 Increased 5.73	Decontaminated and released in FY95 Received from LD200 effort	11.12	Increased 0.44 Decreased 6.36	Waste that was newly generated in FY95 that became covered waste in FY96 Shipped for off-site treatment at commercial facility during FY96	5.20	2.2
None[e]	LA-W932 Explosives	0.0	NC			NC		0.0	0.0
None[e]	LA-W933 Lab Packs	0.0	NC			Increased 0.13	Waste that was newly generated in FY95 that became covered waste in FY96	0.13	0.8

Appendix B

Summary of Treatment Progress and Status

Appendix B - Summary of Treatment Progress and Status

Treatment Technology[A]	Status as of February 1998
Evaporative Oxidation (MWIR Treatment ID GJ-S801C)	Replaced by off-site treatment capability
Thermal Desorption (MWIR Treatment ID GJ-S801B)	DOE funding to proceed with the fabrication of the unit was cut in FY97 due to budget reductions and the availability of other likely treatment options. Replaced by offsite treatment capability
Macroencapsulation (MWIR Treatment ID PX-S803)	Replaced by off-site treatment capability.
Lead Decontamination Trailer (MWIR Treatment ID LA-S0001)	Operational
Chemical and Plating Waste Skid (MWIR Treatment ID LA-S004)	Bench-scale unit being evaluated through treatability studies; RD&D permit application in review.
Hydrothermal Processing	Replaced by off-site treatment capability
Detox Process	Replaced by off-site treatment capability
Gas Cylinder Recontainerization (MWIR Treatment ID LA-S801)	Replaced by off-site treatment capability
Gas Cylinder Scrubbing Skid (MWIR Treatment ID LA-S801)	Replaced by off-site treatment capability
Reactive Waste Treatment Skid (MWIR Treatment ID LA-S003)	Replaced by off-site treatment capability
Amalgamation of Mercury (MWIR Treatment ID PI-S801)	Replaced by off-site treatment capability
Sort, Survey, and Decontamination (MWIR Treatment ID GJ-S804)	Initiated in June 1995, the project was ongoing as of the end of FY96. All activities and compliance dates for all waste items in LA-W929-0 were completed as of the end of FY97.
Distillation of Mercury (MWIR Treatment ID LA-S701)	Replaced by off-site treatment capability
Packed Bed Reactor and Silent Plasma Discharge (MWIR Treatment ID LA-S801) and technology adaptation	Currently looking at feasibility of off-site treatment; DOE/AL has postponed further development of the PBR/SPD; LANL RD&D permitted unit was not used during FY97, currently undergoing closure.
Waste Work Off	See Table ES-1

[A] See the LANL FY95 and FY96 Annual Updates, Section 2.2.2, for additional discussion of these technologies.

ENCLOSURE B

ANNUAL SITE TREATMENT PLAN UPDATE FOR FISCAL YEAR 1997

COMPLIANCE PLAN VOLUME (CPV) UPDATE

Los Alamos National Laboratory Federal Facility Compliance Order Annual Site Treatment Plan Update for Fiscal Year 1997

Compliance Plan Volume

March 31, 1998

Los Alamos

NATIONAL LABORATORY

1.0 INTRODUCTION

On October 4, 1995, the New Mexico Environment Department (NMED) issued a Federal Facility Compliance Order (FFCO) to the Department of Energy (DOE) and its management and operating contractor, the University of California (UC) Regents, requiring Los Alamos National Laboratory (LANL) to implement the Site Treatment Plan (STP) for the treatment of mixed waste. The FFCO contains many provisions for implementation of the STP. Section VII of the FFCO requires LANL to submit an *Annual Site Treatment Plan Update (Update)* to the NMED each year on or before March 31.

The FFCO requires that the Update bring the information in the STP Compliance Plan Volume (CPV) current to the end of the previous federal fiscal year (FY) by describing any revisions or amendments requested or granted in that FY that change the compliance dates, add or delete treatability groups, or in any other way change the schedules of the STP.

Activities Completed During FY97

During FY97, LANL completed 43 required CPV Activities on or before their required Compliance Dates, as shown in Table 1.

Table 1: FY97 FFCO Milestones

STP or FFCO	STP/FFCO Reference	Title/Text	Treatability Group	Compliance Date
FFCO	XX.C.1.	10-day notification for STP milestone 3.1.1A	LA-W901	10/10/96
FFCO	XX.C.1.	10-day notification for STP milestone 3.1.1A	LA-W902	10/10/96
STP	3.1.6A	Submit Permit application, amendment or modification to NMED [chemical plating waste skid]	LA-W913	10/30/96
STP	3.1.6A	Submit Permit application, amendment or modification to NMED [chemical plating waste skid]	LA-W914	10/30/96
STP	3.1.6A	Submit Permit application, amendment or modification to NMED [chemical plating waste skid]	LA-W915	10/30/96
STP	3.4.2A	Complete field survey [part 1 of treatability group]	LA-W929-1	10/30/96
FFCO	XX.C.1.	10-day notification for STP milestone 3.1.6A	LA-W913	11/9/96
FFCO	XX.C.1.	10-day notification for STP milestone 3.1.6A	LA-W914	11/9/96

the purpose of describing any changes to the STP that have been planned, proposed to or approved by NMED since the end of FY97.

2.0 REVISIONS AND AMENDMENTS PROPOSED OR APPROVED IN FY97

The purpose of this section is to provide information about changes to the LANL CPV requested or approved in FY97 as revisions, amendments, or other changes under the FFCO that affect compliance dates. As discussed in CPV Section 1.3, the STP Compliance Plan Volume has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order, as amended and revised. CPV Appendix A provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

To date, there have been five revisions and two amendments to the CPV. In addition, the FFCO was amended once, on May 20, 1997. Table 2 below provides a summary of changes made since 1995. A detailed description of Revision 1.0 (approved prior to FY97) can be found in the CPV Update portion of the FY96 STP *Annual Update*. Descriptions of revisions and amendments since FY97 can be found in Section 6.0 of this CPV Update.

Table 2: Summary of STP/FFCO Chronology

Action	Document Modified	Effective Date	Effect on FFCO/STP
Rev. 1.0	STP/CPV	6/12/96	Added off-site treatment as a parallel preferred option for most MLLW treatability groups
Rev. 2.0	STP/CPV	12/9/96	Reduced volume of LA-W928 by approving reclassification of sludges as LLW
Amendment 1.0	STP/CPV	10/30/96	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Rev. 3.0	STP/CPV	1/27/97	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Amendment 1.0	FFCO	5/20/97	Modified FFCO Sections IV, V, IX, and X to streamline waste transfers and deletions
Amendment 2.0	STP/CPV	9/4/97	Extended CPV Activity 3.1.2B Compliance Date to 12/29/97

Two such revisions and three amendments were approved during FY97, as described in the following Sections.

STP	3.1.2A	Meet all regulatory requirements prior to shipping waste	LA-W903	5/30/97
STP	3.1.2A	Meet all regulatory requirements prior to shipping waste	LA-W904	5/30/97
STP	3.1.2A	Meet all regulatory requirements prior to shipping waste	LA-W905	5/30/97
FFCO	XX.C.1.	10-day notification for STP milestone 3.1.2A	LA-W903	6/9/97
FFCO	XX.C.1.	10-day notification for STP milestone 3.1.2A	LA-W904	6/9/97
FFCO	XX.C.1.	10-day notification for STP milestone 3.1.2A	LA-W905	6/9/97
STP	3.4.2H	Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates [part 3 of treatability group]	LA-W929-3	6/30/97
FFCO	XX.C.1.	10-day notification for STP milestone 3.4.2H	LA-W929	7/10/97
STP	3.4.1A(3)	Segregate lead waste into decontamination groupings [per schedule submitted under 3.4.1A(2)]	LA-W930-2	7/31/97
FFCO	XX.C.1.	10-day notification for STP milestone 3.4.1A(3)	LA-W930-2	8/10/97
STP	3.1.2B	Complete shipping waste	LA-W903	9/30/97
STP	3.1.2B	Complete shipping waste	LA-W905	9/30/97
STP	3.4.1A(1)	Complete lead decontamination [using decontamination trailer]	LA-W930-1	9/30/97
STP	3.4.2I	Propose additional compliance dates if necessary [part 3 of treatability group]	LA-W929-3	9/30/97

In certain circumstances, where modifications to Compliance Dates were required, DOE and UC requested these as revisions or amendments to the CPV, as discussed in Sections 2.0 and 5.0 of this CPV Update.

1.2 Contents of this Update

Section 2.0 of the CPV Update includes a description of revisions and amendments involving compliance date changes that were proposed or approved in FY97. Section 3.0 is provided for the purpose of describing deletions of STP waste in accordance with the requirements in Section IX (*Deletion of Waste*) of the FFCO, that were proposed or approved during the previous FY (one occurred in FY97). Section 4.0 is provided for the purpose of describing any additions of new covered waste in accordance with the requirements in FFCO Section VIII (*Addition of New Covered Waste*). Section 5.0 is provided for the purpose of describing any other changes to the overall schedule in the CPV of the STP that were proposed or approved in FY97. Section 6.0 is provided for

FFCO	XX.C.1.	10-day notification for STP milestone 3.1.6A	LA-W915	11/9/96
FFCO	XX.C.1.	10-day notification for STP milestone 3.4.2A	LA-W929	11/9/96
STP	3.1.1B	Complete shipping waste	LA-W901	12/30/96
STP	3.1.1B	Complete shipping waste	LA-W902	12/30/96
STP	3.1.3A	Submit Permit application, amendment or modification to NMED [evaporative oxidation skid]	LA-W906	12/30/96
FFCO	XX.C.1.	10-day notification for STP milestone 3.1.1B	LA-W901	1/9/97
FFCO	XX.C.1.	10-day notification for STP milestone 3.1.1B	LA-W902	1/9/97
FFCO	XX.C.1.	10-day notification for STP milestone 3.1.3A	LA-W906	1/9/97
STP	3.4.2D	Complete RCRA and radiological sampling [part 2 of treatability group]	LA-W929-2	1/28/97
STP	3.4.2G	Complete visual verification [part 3 of treatability group]	LA-W929-3	1/28/97
FFCO	XX.C.1.	10-day notification for STP milestone 3.4.2D	LA-W929	2/7/97
FFCO	XX.C.1.	10-day notification for STP milestone 3.4.2G	LA-W929	2/7/97
STP	3.4.2B	Submit documentation declaring waste items as nonradioactive, or submit documentation assigning waste items to applicable treatability groups [part 1 of treatability group]	LA-W929-1	2/28/97
STP	3.4.2E	Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates [part 2 of treatability group]	LA-W929-2	2/28/97
FFCO	XX.C.1.	10-day notification for STP milestone 3.4.2B	LA-W929	3/10/97
FFCO	XX.C.1.	10-day notification for STP milestone 3.4.2E	LA-W929	3/10/97
FFCO	VII.A.	Submit Annual STP Updates	NA	3/31/97
STP	3.4.2C	Propose additional compliance dates if necessary [part 1 of treatability group]	LA-W929-1	4/30/97
STP	3.4.2F	Propose additional compliance dates if necessary [part 2 of treatability group]	LA-W929-2	4/30/97
FFCO	XX.C.1.	10-day notification for STP milestone 3.4.2C	LA-W929	5/10/97
FFCO	XX.C.1.	10-day notification for STP milestone 3.4.2F	LA-W929	5/10/97

2.1 TA-50-1 Waste Water Treatment Sludge Re-Classification (CPV Rev. 2.0)

See Section 3.1 for a complete discussion of this Revision, because it involved deletion of covered waste.

2.2 Sort, Survey, and Decontamination (CPV Amendment 1.0/ Rev. 3.0)

On October 21, 1996, DOE and UC requested a revision to revise the CPV language in Section 3.4.2, titled *Sorting, Surveying, and Decontamination* (SSD; 8). The following requests were made by DOE and UC:

- to subdivide the 1,250 SSD waste items in MWIR ID no. LA-W929 into three subgroups, where the first subgroup contained approximately 1049 items that had been surveyed as of that date;
- to modify the existing CPV language to allow additional sampling and analysis to proceed for some (approximately 101) of the remaining 201 unsurveyed SSD items (subgroup 2);
- to allow for visual inspections of the approximately 39 other unsurveyed SSD items that cannot or should not be sampled (subgroup 3); and
- to establish compliance dates for subsequent disposition of all 1,250 LA-W929 waste items.

As part of their October 21, 1996 letter, DOE and UC requested an amendment to extend the original October 30, 1996 compliance date for the LA-W929 waste items, and to provide other interim compliance dates for the remaining unsurveyed items, in order to provide sufficient time for processing of the revision request.

NMED responded by letter to UC and DOE on October 30, 1996 approving Amendment 1.0, and providing additional language it felt was necessary for approval of the revision (9). NMED approved UC and DOE's revision as Revision No. 3.0 to the STP on January 27, 1997 (10).

2.3 Federal Facility Compliance Order Amendment (FFCO Amendment 1.0)

Unlike other changes discussed in Section 2.0 (i.e., modifications to the CPV), Section 2.3 describes changes to the language of the FFCO itself. On October 29, 1996, DOE and UC requested an amendment to the LANL FFCO issued October 4, 1995 (11). This amendment was requested in order to resolve practical problems that had been encountered while implementing certain FFCO requirements at LANL. While LANL was trying to work off STP waste in storage, numerous instances arose that would

eventually lead to delays in meeting compliance dates in LANL's STP, for example, transfers of waste to another treatability group or addition of newly identified wastes to a treatability group. DOE and UC proposed amendments to the FFCO to address these problems.

In addition to the requested amendments to Section X.B.4 of the FFCO described above, DOE and UC also requested changes to Section IX, "*Deletion of Waste*". These changes were approved as Amendment 1.0 to the FFCO, and signed by all parties on May 20, 1997(12). The new FFCO provisions were used to transfer wastes from LA-W904 to other treatability groups during FY97 (see discussion in Section 4.0).

2.4 "Soils With Heavy Metals" in Storage at TA-54 (CPV Amendment 2.0)

On August 26, 1997, DOE and UC submitted a status report regarding the 59 soil waste items listed in the treatability group MWIR ID no. LA-W904, "*Soils With Heavy Metals.*" During FY97, DOE and UC requested to reclassify these items as nonhazardous (see discussion in Section 3.2). Following the subsequent withdrawal of this request, DOE and UC proceeded with shipment of 46 of the 59 LA-W904 items to Envirocare in Utah as mixed low-level waste (MLLW) (bulked into 44 drums for shipment). 50 of the 59 LA-W904 items (in 48 drums) originally were scheduled to be shipped for treatment, in accordance with CPV Section 3.1.2; the others were reassigned to other treatability groups.

Just prior to the August 5, 1997 shipment, however, four (4) of the 50 items were identified as containing special nuclear materials (SNM) at levels exceeding the 1 gram temporary limit imposed on Envirocare in a June, 1997 Confirmatory Order issued by the Nuclear Regulatory Commission (NRC). Therefore, these four drums were withheld from the August 5, 1997 shipment.

DOE and UC had already received Envirocare's preapproval to ship these 4 shippable LA-W904 items when the revised SNM limits were imposed, but it became clear that they could not be shipped prior to their September 30, 1997 compliance date. Therefore, in the August 26, 1997 letter, DOE and UC requested an amendment to extend this compliance date, to address the problem caused by the unresolved NRC Confirmatory Order issues. NMED approved this request as Amendment 2.0 to the CPV on September 4, 1997, which granted a 90-day extension to the September 30, 1997 compliance date for this treatability group (to December 29, 1997) (13).

Since the end of FY97, DOE and UC were able to ship two of the remaining 4 shippable LA-W904 items to Envirocare. In Rev. 5.0, NMED formally revised the compliance date for these remaining LA-W904 items to December 30, 1998 (see Section 6.0 for discussion of Rev. 5.0).

3.0 DESCRIPTION OF WASTE DELETED IN ACCORDANCE WITH SECTION IX

Two FY97 deletion requests will be discussed in this Section. The first, for reclassification of the TA-50-1 wastewater treatment sludges as nonhazardous, was submitted in FY96 but not approved until FY97. The second, a request to reclassify "*Soils With Heavy Metals*" as nonhazardous, was submitted and subsequently withdrawn during FY97.

A third deletion request, as part of Revision 5.0, was submitted during FY97 but was not approved until after the end of FY97. See Section 6.0 for discussion of Rev. 5.0.

3.1 TA-50-1 Wastewater Treatment Sludge Re-Classification (CPV Rev. 2.0)

In a letter dated January 12, 1996, LANL requested reclassification (as nonhazardous low-level waste) of 1,228 out of a total of 1,288 drums of wastewater treatment sludge stored at LANL(14), in accordance with the FFCO, Section V.B, and the deletion provisions in Section IX. These sludges are generated by treatment of wastewaters at LANL's TA-50, Building 1 Radioactive Liquid Waste Treatment Facility (RLWTF). The 1,288 drums of sludges included in the FFCO were in the treatability group "*dewatered treatment sludge,*" MWIR waste ID LA-W928, and are addressed in Section 3.3 of the CPV.

The RLWTF was constructed to treat radioactively-contaminated wastewater from nuclear research activities and other operations conducted at LANL. During the 1980s, DOE and UC began managing the sludge as MLLW, based on a conservative application of regulatory requirements. These sludges later became subject to management as "covered wastes" in the STP. DOE and UC conducted a recent reevaluation of the available data, together with a review of the numerous earlier studies at LANL reviewing various aspects of RLWTF operations and/or sludges in particular. Based on the reevaluation of the sludges, it was determined that the drums of sludge should not be regulated under RCRA and should be re-classified as LLW. NMED was provided with information such as analytical results, relevant LANL Administrative Requirements (ARs), analytical methods, Quality Assurance/Quality Control (QA/QC) procedures for sampling, and excerpts from LANL's Chemical and Mixed Waste Database (15, 16).

NMED agreed with DOE and UC's determination that the sludges should be reclassified, by way of letter dated October 7, 1996 (17). Due to the significance of the amount of waste proposed to be reclassified, NMED stipulated that the reclassification be approved through the revision process. DOE and UC modified their original request to address 1,227 of the 1,288 drums, and provided NMED with additional information to assure that only reclassified wastes were removed from the treatability group (MWIR waste ID LA-W928) for disposal on-site. On December 9, 1996, NMED approved DOE and UC's

request to reclassify the sludges as LLW as Revision 2.0. Thus, only 61 of the original 1,288 sludge drums remain covered in the CPV inventory (18).

3.2 Re-Characterization of "Soils With Heavy Metals" in Storage at TA-54

In October, 1996, by letter to NMED, DOE and UC proposed to reclassify (as nonhazardous low-level waste) forty-seven (47) 55-gallon containers of soil waste being stored at LANL (19). These soils are listed in the STP under CPV Section 3.1.2 in the treatability group "*Soils With Heavy Metals*," MWIR waste ID LA-W904. These soil and debris wastes were generated from the decommissioning and decontamination of the TA-2 Water Boiler Reactor and TA-35 Los Alamos Power Reactor Experiment No. II (LAPRE II). The Water Boiler Reactor and LAPRE II were used to provide researchers with an intense source of neutrons to conduct experiments. Originally, the waste was classified as MLLW due to the suspected presence of lead and chromium. The suspected lead component in the waste was believed to have come from soil that was taken from under and over lead plates and vent piping. Chromium, a product of corrosion, would have resulted from the fuel solution that could strip the chromium from the inside of the stainless steel tank. More recent sampling results suggested that 47 of the 59 soil items should not be classified as mixed waste.

Between October, 1996, and May 16, 1997, NMED made several requests for additional information, and during this period, DOE and UC modified the original reclassification request to address 46, rather than 47, containers of soil from LA-W904 (20). Because of the time needed to complete arrangements for off-site RCRA treatment of these wastes before their September 30, 1997 compliance date (should the pending reclassification request not be approved), DOE and UC determined that time had run out for further pursuit of NMED approval of the reclassification request. It was withdrawn, by letter dated May 26, 1997.

Following the withdrawal of the reclassification request, DOE and UC proceeded with shipment of 48 of the 50 shippable LA-W904 items to Envirocare in Utah as mixed low-level waste (MLLW). Two shippable items remain on-site as of March 31, 1998 (see discussion of CPV Amendment 2.0 in Section 2.4). The remaining 9 "non-shippable" items were transferred to more appropriate treatability groups (see discussion of transfers in Section 4.0, and of the Rev. 5.0 request in Section 6.0).

4.0 DOCUMENTATION OF NEW COVERED WASTE IN ACCORDANCE WITH THE REQUIREMENTS IN SECTION VIII

Four requests related to volume increases in treatability groups were submitted in FY97: Rev. 4.0, Rev. 5.0, and two waste transfers. Three of these requests involved transfer of existing covered wastes to other treatability groups; only Rev. 5.0 addressed the addition of new covered wastes to the CPV, as defined in FFCO Section VIII.

Since Revs. 4.0 and 5.0 were submitted during FY97 but not approved until after the end of FY97, they are discussed in Section 6.0, "R*evisions and Amendments Proposed or Approved Since FY97.*" The two waste transfers are discussed below.

4.1 Waste Transfers From "Soils With Heavy Metals"

On September 10, 1997, based on recent re-characterization data, DOE and UC submitted two requests for transfer of existing MWIR waste ID LA-W904 items to other, more appropriate treatability groups, in accordance with the amended provisions of the FFCO (see discussion of FFCO Amendment 1.0 in Section 2.3). In one letter, DOE and UC requested the transfer of six (6) of the 59 items listed in the treatability group "*Soil with heavy metals*," MWIR waste ID LA-W904, to the treatability group "*PCB wastes with RCRA components*" (MWIR waste ID no. LA-W910). In the other letter, DOE and UC requested the transfer of two (2) of the 59 items listed in the treatability group "S*oil with heavy metals*," to the treatability group "o*rganic-contaminated combustible solids*" (LA-W911).

NMED approved the transfers, by letter dated September 18, 1997. The resulting volume changes were recorded in CPV Rev. 5.0 (see Section 6.0).

5.0 ANY OTHER CHANGES TO THE OVERALL SCHEDULE IN THE COMPLANCE PLAN VOLUME

No CPV schedule changes (other than those discussed in Sections 2.0 and 6.0 of this Update) were proposed or approved in FY97. However, although not involving schedule changes *per se*, the following Section provides a discussion of the Letter of Violation received by UC and DOE during FY97.

5.1 February 14, 1997 Letter of Violation

On February 14, 1997, NMED issued a Letter of Violation to LANL containing five apparent findings related to LANL's compliance with STP requirements. NMED alleged that DOE and UC failed to provide NMED notification pursuant to Section XX.C.1 of the FFCO and meet the compliance date for Activity 3.1.1A; that DOE and UC failed to meet the compliance date for Activity 3.4.2A; that DOE and UC failed to provide NMED timely notification regarding waste sent off-site, as set forth in Activity 3.1.1C; that DOE and UC failed to obtain approval from NMED for a revision for increases in treatability groups reported in the FY95 *Annual Update*; and that DOE and UC failed to report waste previously omitted from the October 1995 CPV inventory.

On April 4, 1997, DOE and UC submitted an STP Corrective Action Plan (STP-CAP) to NMED in order to address concerns raised in the February 14, 1997 Letter of Violation. Elements of the STP-CAP addressed each of the five apparent violations at issue. The STP-CAP identified several root causes of each occurrence and addresses each with a

series of corrective action steps. All corrective action steps were completed before the end of FY97.

6.0 REVISIONS AND AMENDMENTS PROPOSED OR APPROVED SINCE FY97

Four revision requests are discussed in this Section. The first two, Revs. 4.0 and 5.0, were submitted during FY97 but not approved until after the end of FY97.

Table 3: Summary of 1997 Revisions

Action	Document Modified	Effective Date	Effect on FFCO/STP
Rev. 4.0	STP/CPV	12/29/97	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added treatability groups, and deleted treated items
Rev. 5.0	STP/CPV	12/29/97	Added volumes reported in FY95 and FY96 *Annual Updates* (and certain other items) to several treatability groups, added Activities and Compliance Dates, added CPV Appendices, and deleted treated items

The other two revision requests will be submitted during FY98. All four requests are discussed below.

6.1 Sort, Survey, and Decontamination (CPV Rev. 4.0)

On February 28, 1997, DOE and UC requested a revision to revise the CPV language as a consequence of completing survey activities for the 1,250 covered waste items originally in CPV Section 3.4.2, titled *Sorting, Surveying, and Decontamination.*

The purpose of this revision was to document the transfer of STP covered wastes from treatability group LA-W929, "*Nonradioactive or suspect items to be surveyed,*" to other treatability groups, and the deletion of some of these LA-W929 covered wastes (because they were treated and disposed). These transfers and deletions were the result of Activities A-I currently listed in Section 3.4.2, *Sorting, Surveying and Decontamination,* in the Compliance Plan Volume (CPV) of the Site Treatment Plan (STP). As a result of this revision (and Revision 5.0), 1,237 items in the original inventory of treatability group LA-W929 were transferred to other treatability groups, 11 items were deleted as part of Revision 5, and an additional 2 were shipped in FY97 and are addressed in this submittal.

Detailed description of the revision. In Revision 4.0, DOE and UC proposed to revise the Compliance Plan Volume language as follows:

- To transfer 1196 covered waste items in Treatability Group LA-W929 items to other treatability groups (which involves creation of two new treatability groups);
- To transfer 41 covered waste items in treatability group LA-W929 that have been determined to be missing or nonexistent to the newly-created category called *"Missing/nonexistent/TBV"* (to be verified);
- To document the deletion of 11 already-treated LA-W929 items (*NOTE: the deletions themselves will occur as part of Revision 5.0, and future revisions; the remaining 2 items (0.0076 m3) were shipped December 18, 1996, and the documentation of their deletion is in Revision 6, and the treatment is reported in the FY97 Annual Update),* and
- To change the treatability group name for MWIR ID no. LA-W923, as discussed below.

1. **Transfer of the referenced LA-W929 items to other treatability groups**. Most of the LA-W929 items were proposed to be transferred to other existing treatability groups. DOE and UC proposed that in most cases, SSD items being transferred to other existing treatability groups (TGs) will be treated according to the Compliance Dates already existing for those TGs (with a few exceptions as discussed below; DOE and UC proposed to establish new Activities and Compliance Dates in those instances).

   New treatability groups were found to be necessary to accommodate some of the LA-W929 waste items that could not reasonably be transferred to other existing TGs. The new TGs were proposed to be added to CPV Section 3.3, "*Mixed Waste Requiring Further Characterization or for Which Technology Assessment Has Not Been Done.*" DOE and UC proposed to establish Activities and Compliance Dates for the new treatability groups.

2. **Transfer of missing or nonexistent LA-W929 items**. During completion of SSD activities, 41 of the 1,250 covered waste items in TG LA-W929 were determined to be missing or nonexistent . DOE and UC proposed to revise the CPV language to transfer the missing or nonexistent LA-W929 items to a new category, called *"Missing/ nonexistent/TBV"*, which was proposed for addition to new CPV Section 3.5 . LANL's management strategy for addressing missing or nonexistent items is also discussed in new Section 3.5. DOE and UC proposed to establish Activities and Compliance Dates for the new category.

3. **Deletion of treated LA-W929 items.** During completion of SSD activities, it was found that 13 of the 1,250 LA-W929 items had already been treated. Rev. 4.0 accounted for the deletion, but the deletions for 11 of these items occurred as a part of

Rev. 5.0 and will be in future revisions; the remaining 2 items (0.0076 m3) were shipped December 18, 1996, and the documentation of their deletion is in Revision 6, and the treatment is reported in the FY97 Annual Update.

4. **Change of treatability group name for MWIR ID no. LA-W923**. During completion of SSD activities, DOE and UC identified that eleven of the 1,250 LA-W929 mixed waste items are liquid oxidizers. DOE and UC requested that the treatability group name for MWIR ID no. LA-W923 be changed to "*Liquid and solid oxidizers*," and that the eleven LA-W929 items be added to this treatability group.

Since all 1,250 items from the original SSD subgroups 1, 2, and 3 were being reassigned to other TGs (including the new TGs), or the new category, or deleted, the three subgroups of LA-W929 will no longer contain any of the original waste items under the approved revision. Please note, however, that one (1) LA-W929 item entered the covered waste inventory during FY95; it was added to LA-W929 as part of Rev. 5.0, and thus LA-W929 required new Compliance Dates as part of Rev. 5.0. This one item will be transferred to an existing Treatability Group in Revision 6.0.

NMED approved the revision request on December 29, 1997.

6.2 Addition of New Pre-FY97 and FY97 Covered Waste (CPV Rev. 5.0)

On March 31, 1997, concurrently with the FY96 *Annual Update,* DOE and UC requested a revision to modify the CPV. The purpose of this revision was to incorporate the following into the LANL STP Compliance Plan Volume: (1) increases and decreases (additions and deletions) in the covered waste inventory that occurred between the time when the original STP inventory was established (as reported in the October 4, 1995 FFCO) and the end of FY95, as presented in the *FY95 Update;* (2) increases and decreases (additions and deletions) in the covered waste inventory occurring during FY96, as presented in the *FY96 Update;* and (3) several other changes not related to the two *Annual Updates.* These other changes, which include both additional wastes and additional CPV text, will be described below.

The primary consequence of this revision was to make the mixed low-level waste (MLLW) covered waste inventories in the Compliance Plan Volume current as of the end of FY96 (except for the post-FY96 volume changes). The other changes DOE and UC requested included the following:

- Addition of a few mixed waste items that became covered waste under the FFCO since the end of FY96 (even though they would not normally be reported until publication of the *FY97 Update* and its corresponding revision), in order to expedite their shipment to off-site facilities for treatment;

- Transfer of missing items from several treatability groups to the category called *"Missing/ nonexistent/TBV"* (even though their nonexistence was verified after the end of FY96);

- Modification of the existing Compliance Dates for Activities 3.1.2B and 3.3E;

- Addition of two Appendices, which provide a history of CPV revisions and amendments (as Appendix A of the CPV), and a summary table of covered waste inventory changes (as Appendix B), respectively;

- Addition of *"(A) schedule for development of lead processing techniques and options."* DOE and UC were required to incorporate this schedule into Section 3.4.1 on page 15 of the Compliance Plan Volume for those lead shapes and forms in the treatability group MWIR ID LA-W930 found to be *"not amenable to processing using the lead decontamination trailer."* (The schedule was originally submitted to NMED on June 26, 1996, but NMED informed LANL on February 25, 1997 that the schedule must be added to the CPV as part of a formal revision); and

- Addition of minor clarifying language for CPV Section 2.1.4 regarding the use of off-site recycling facilities.

These changes allowed the additional covered wastes to be treated or otherwise managed in accordance with the Activities and Compliance Dates pertaining to each treatability group. NMED approved the revision request on December 29, 1997. Approval of this revision also completed the last remaining corrective action step in the STP-CAP (see Section 5.0).

6.3 Current Revision (CPV Rev. 6.0)

LANL is submitting, a revision request (Revision 6.0) concurrently with this *Annual Update*. This revision addresses changes that will adjust the Compliance Plan Volume inventory to reflect FY97 activities and estimated inventory changes. Revision 6.0 also proposes specific numerical changes and/or corrections that enable the overall CPV inventory to be reconciled. In addition, Revision 6.0 will transfer the sole remaining item in LA-W929, (which was added in Rev 5.0), to an existing Treatability Group.

6.4 Future Revision (CPV Rev. 7.0)

A request for a revision to include certain new covered wastes that have entered the covered waste inventory since FY97 will be submitted in the near future. As part of this revision request, LANL will propose specific changes that will provide a much-needed updating of the CPV. This revision would also address the following additional issues:

- LANL is currently reviewing on and off site recycling options for all waste streams present in LANL's STP. Pollution prevention initiatives such as the use of LANL's Chemical Exchange Program to recycle chemicals characterized as STP mixed waste, and recycling of metals such as lead, are two examples of recycling options that are being evaluated for the purpose of reducing LANL's STP waste inventory, as well as reducing the generation of additional mixed waste in the future.

- LANL will include language to modify the CPV to specify clearly that on and off-site treatability studies are used to explore alternative treatment options that may be practicable for any or all of LANL's STP mixed waste streams. Some treatment of covered wastes occurs as a consequence of the treatability study process.

- LANL will also include language to modify CPV Section 3.0 to remove activities and compliance dates related to the construction, permitting and operation of on-site treatment skids, and to clarify that off-site treatment is the primary treatment option applicable to all MLLW waste streams in LANL's CPV.

BIBLIOGRAPHY

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2. "*Hazardous Waste Report for Los Alamos National Laboratory*" Volumes I and II, ESH-19, Los Alamos National Laboratory (February 1996)

3. "*Transuranic Waste Baseline Inventory Report Revision 3*", US Department of Energy, Carlsbad Area Office (December 1995)

4. "*AL Mixed Waste Treatment Plan*", Los Alamos National Laboratory (March 1994)

5. Congress, 1996. Text of Public Law 104-201, Congressional Record dated September 23, 1996, Amendment to Public Law 102-579, 1992 *Waste Isolation Pilot Plant Land Withdrawal Act (106 Stat. 4777)*

6. "*Los Alamos National Laboratory Federal Facility Compliance Order Annual Site Treatment Plan Update for Fiscal Year 1995*" (March 31, 1996)

7. 40 DFR Part 194, Criteria for the Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations: Certification Decision; Proposed Rule" (Federal Register V.62, No. 210, Oct. 30 1997, pp. 58792-58838)

References Cited in CPV Update

8. "*Los Alamos National Laboratory (LANL) Federal Facility Compliance Order (FFCO) October 4, 1995, Site Treatment Plan (STP) Sort, Survey, and Decontamination (SSD) Request for Revision No. 3 and Amendment No. 1*", J. Plum, LAAO, to J. Archuleta, NMED (October 21, 1996)

9. "*Los Alamos National Laboratory (LANL) Federal Facility Compliance Order (FFCO) October 4, 1995, Site Treatment Plan (STP) Sort, Survey, and Decontamination (SSD) Request for Revision No. 3*", J. Archuleta, NMED, to J. Plum, LAAO (October 30, 1996)

11. "*Los Alamos National Laboratory's Federal Facility Compliance Order (October 4, 1995), Request for Amendment*", J. Plum, LAAO, to J. Archuleta, NMED (October 29, 1996)

14. "*Re-characterization of Wastewater Treatment Sludge in Storage at Technical Area (TA) 54 - Request for Removal from Federal Facility Compliance Order (FFCO)*", J. Plum, LAAO, to B. Garcia, NMED (January 12, 1996)

15. "*Site Treatment Plan (STP), Los Alamos National Laboratory (LANL) - Wastewater Treatment Sludge*", J. Plum, LAAO to J. Archuleta, NMED (August 14, 1996)

16. "*Los Alamos National Laboratory (LANL), Site Treatment Plan (STP), Wastewater Treatment Sludge*", J. Plum, LAAO, to J. Archuleta, NMED (November 7, 1996)

17. "*Los Alamos National Laboratory (LANL) TA-50-1 Wastewater Treatment Sludge Reclassification*", J. Archuleta, NMED, to J. Plum, LAAO (October 7, 1996)

18. "*Hazardous and Radioactive Materials Bureau Approval of Reclassification of TA-50-1 Waste Water Treatment Sludge*", J. Archuleta, NMED, to J. Plum, LAAO (December 4, 1996)

19. "*Recharacterization of "Soil With Heavy Metals" in Storage at Technical Area (TA) 54 - Request for Removal from the Site Treatment Plan (STP)*", J. Archuleta, NMED, to J. Plum, LAAO (October 18, 1996)

20. "*Los Alamos National Laboratory (LANL) Request to Reclassify "soil with heavy metals" in Section 3.1.2 of the Site Treatment Plan Compliance Plan Volume (STP/CPV) of the Federal Facility Compliance Order (FFCO) October 4, 1995*", J. Plum, LAAO, to J. Archuleta, NMED (November 22, 1996)

ENCLOSURE C

SITE TREATMENT PLAN

PROPOSED REVISION 6.0

LOS ALAMOS NATIONAL LABORATORY SITE TREATMENT PLAN
PROPOSED REVISION 6.0

LOS ALAMOS NATIONAL LABORATORY
FEDERAL FACILITY COMPLIANCE ORDER

The purpose of this revision request is to reflect changes in the mixed low-level waste (MLLW) inventories in the Los Alamos National Laboratory (LANL) Compliance Plan Volume (CPV) of the Site Treatment Plan (STP), as discussed in the Fiscal Year 1997 (FY97) STP *Annual Update*. This revision request also reflects other CPV changes as detailed below. The changes proposed by this revision to the CPV will allow the added covered wastes to be treated or otherwise managed in accordance with the Activities and Compliance Dates pertaining to each treatability group, as adopted or revised herein. The proposed CPV text changes are indicated in a redline strikeout version provided in Enclosure D. The proposed revised CPV text in a clean copy version is provided as Enclosure E.

Section X.C.2.a. of Federal Facility Compliance Order (Los Alamos National Laboratory): Detailed description of the proposed revision.

The Department of Energy (DOE) and the University of California (UC) are proposing to revise the Compliance Plan Volume text to reflect the following changes in MLLW covered waste inventories, as described in the FY97 STP *Annual Update*:

- Increases to the STP covered waste inventory due to the addition of newly covered waste and decreases to the STP covered waste inventory due to shipments of covered wastes during FY97;

- Transfer of wastes from treatability group *"Soil with heavy metals,"* Mixed Waste Inventory Report (MWIR) waste ID LA-W904, to treatability group *"Organic-contaminated combustible solids,"* MWIR waste ID LA-W911, and to treatability group *"PCB wastes with RCRA components,"* MWIR waste ID LA-W910, as approved by the New Mexico Environment Department (NMED), by letter dated September 18, 1997;

- Increase due to the return of an unused treatability study sample from an off-site facility in FY97; and

- Corrections to the original (October 4, 1995) STP covered waste inventory.

In addition, the following CPV changes are proposed:

- Corrections to LANL STP Revision 5.0;

- Transfer of one item from the treatability group *"Nonradioactive or Suspect Waste Items to be Surveyed,"* MWIR waste ID LA-W929, to treatability group *"Lab Packs,"* MWIR waste ID LA-W933, thereby completing Activities 3.4.2 J and K; and

- Addition of Compliance Dates in Sections 3.1.3 and 3.4.1 for waste that became covered waste during FY97.

The volume changes are proposed in accordance with the applicable requirements in the FFCO, as amended: Section VIII, *"Addition of New Covered Waste"*; Section X.B.4, *"Revisions"*; and Section XI, *"Deletion of Waste."* These proposed changes are detailed in the following sections.

1. Changes in mixed low-level covered waste inventories to reflect increases to the STP covered waste inventory due to the addition of newly covered waste and decreases to the STP covered waste inventory due to shipments of covered wastes during FY97.

The increases in covered waste inventory as of the end of FY97 are attributed primarily to waste that was newly generated in FY96 which was not treated within 12 months of generation, thereby becoming covered waste during FY97. The decreases reflect the treatment and disposal or recycling of covered waste inventory at off-site commercial facilities and recycling activities at the on-site decontamination facility (for LA-W930, *lead for surface decontamination*, only) during FY97. These increases and decreases for MLLW are reported in Sections 2.1.1 and 2.2.1 of the FY97 Update and are summarized in CPV Appendix B, Table B-1.

2. Transfer of wastes from treatability group *"Soil with heavy metals,"* MWIR waste ID LA-W904, to treatability group *"Organic-contaminated combustible solids,"* MWIR waste ID LA-W911, and to treatability group *"PCB wastes with RCRA components,"* MWIR waste ID LA-W910.

These approved transfers are included in this revision request to reflect the STP covered waste inventory changes. The volumes are reflected in Table C-1. Two letters were sent to Ms. Janice Archuleta of the Hazardous and Radioactive Materials Bureau (HRMB), NMED, on September 10, 1997 and subsequently approved by NMED by letter dated September 18, 1997. One letter requested the transfer of two items listed in the LANL STP in the treatability group *"Soil with heavy metals,"* MWIR waste ID LA-W904, to treatability group *"Organic -contaminated combustible solids,"* MWIR waste ID LA-W911. The second letter requested the transfer of six items listed in the LANL STP in the treatability group *"Soil with heavy metals,"* MWIR waste ID LA-W904, to treatability group *"PCB wastes with RCRA components,"* MWIR waste ID LA-W910.

Table 1. LA-W904 Items Transferred on September 18, 1997.

Number of Items	Total Volume Per Waste Sub-Stream (cubic meters)	New MWIR waste ID
6 items (were bulked into 2)	0.62456	Transferred to LA-W910
2	0.4164	Transferred to LA-W911

3. Adjustment to reflect an unused treatability study sample returned from an off-site facility in FY97.

This material was sent to be used in a treatability study by the DOE Grand Junction Projects Office and was reported as a decrease in the FY 95 Update and in Revision 5.0. The unused material was returned to LANL and placed into storage. This waste is proposed to be added back to the original covered waste inventory in the treatability group, *"Organic-Contaminated Noncombustible Solids,"* MWIR waste ID LA-W919 (subgroup -0).

4. Corrections to the original (October 4, 1995) STP covered waste inventory.

DOE and UC are proposing the following correction to the STP covered waste inventory in treatability group *"Nonhalogenated Organic Liquids,"* MWIR waste ID LA-908. Upon characterization for shipment of the waste to an off-site facility for treatment and disposal, it was determined that a waste drum contained a greater amount of waste than originally reported by the generator. This drum was shipped for treatment and the correct covered waste volume was included in volumes reported in the notification letter dated January 9, 1997. The volume adjustment is summarized in Table C-2 below.

DOE and UC are proposing the following correction to the STP covered waste inventory in the treatability group *"Bulk Oils,"* MWIR waste ID LA-W909. Three drums in the treatability group *"Bulk Oils,"* MWIR waste ID LA-W909, were reported as one quarter full each in the original STP inventory, based upon interviews with the generator. However, upon characterization for shipment of these items to an offsite facility for treatment and disposal, a greater amount of waste was identified in the drums. The correct covered waste volume was reported as shipped for treatment in the notification letter dated January 9, 1997. The volume correction is summarized in Table C-2 below.

DOE and UC are proposing the following addition and deletion of one item of isopropyl alcohol (IPA) waste in the STP covered waste inventory. This item was discussed in the notification letter dated January 9, 1997. This additional item of IPA waste was identified during characterization of other IPA wastes (MWIR waste ID LA-W901) for shipment to an off-site facility for treatment and disposal. As stated in the notification letter, a

treatment option for this item may not have been available if it had not been shipped with the other IPA wastes. The volume adjustments are summarized in Table C-2 below.

DOE and UC are proposing the following correction to the original STP covered waste inventory. One item was reported in the original STP covered waste inventory as a full drum in the treatability group, *"Nonhalogenated Organic Liquids,"* MWIR waste ID LA-W908. However, upon characterization for shipment of the item to an off-site facility for treatment and disposal, a smaller amount of waste was identified in the drum. The volume correction is summarized in Table C-2.

DOE and UC are proposing the following correction to the STP covered waste inventory in treatability group "*Lead Requiring Sorting,*" MWIR waste ID LA-W931. The correction arises from a discrepancy between the volume for one waste item as reflected in the original waste documentation completed by the generator and the volume for that waste item as used to estimate the original STP covered waste volume, where the latter volume was too small. The larger volume was included as part of a decrease in volume as reported in the March, 1996 FY95 STP *Annual Update*. The volume adjustment is summarized in Table C-2 below.

Table 2. Corrections to Original (October 4, 1995) STP Covered Waste Inventory Reported in FY97 STP *Annual Update*

MWIR waste ID	Volume Included in Original STP Inventory	Volume Shipped and Reported to NMED	Volume Correction
LA-W908	0.11355 m^3	0.18925 m^3 (50 gal.)	Increase 0.076 m^3
LA-W909 (3 items)	0.05299 m^3 each	0.2082 m^3 (55 gal) each	Total Increase of 0.47 m^3
IPA Waste	0.0 m^3	0.0005 m^3	Increase and Decrease 0.0005 m^3
LA-W908	0.208 m^3	0.095 m^3	Decrease 0.113 m^3
LA-W931	0.1893 m^3	0.2082 m^3 [a]	Increase 0.02 m^3

[a] This volume was shipped to the on-site decontamination facility prior to the issuance of the FFCO, as discussed in the FY95 STP *Annual Update*.

5. Corrections to LANL STP Revision 5.0.

DOE and UC are requesting that the following corrections be made to Revision 5.0 to the *Site Treatment Plan*:

- The volume increase reported in Appendix B of Revision 5.0, in the column labeled *"Revision 5.0, (Other Changes)"* for the treatability group *"Aqueous organic liquids,"* MWIR waste ID LA-W906, was reported incorrectly as 4.83 cubic meters. The correct volume is 4.26 cubic meters. This correction changes the net volume reported in Section 3.1.3 of the December, 1997 version of the LANL CPV to 10.32 cubic meters.

- The volume transfer from the treatability group *"Soils with heavy metals,* "MWIR waste ID LA-W904, to the *"Missing/nonexistent/TBV"* waste category was incorrectly reported as 0.2082 cubic meters. This volume transfer was reported in Appendix B of Revision 5.0, in the column labeled *"Revision 5.0, (Other Changes)"*. The correct volume is 0.1047 cubic meters, as reported in DOE's letters dated May 29 and August 26, 1997. This correction changes the net volume for this treatability group reported in Section 3.1.2 of the December, 1997 version of the LANL CPV to 10.54 cubic meters.

- The numbers of items and volumes for LA-W930 as reported in the table in Section 3.4.1 of the Revision 5.0 of the CPV were incorrect. As defined in the CPV text, "(t)he first category is lead in the original LA-W930-0 inventory that is amenable to decontamination in the on-site lead decontamination trailer." In Table 1 of DOE's letter dated August 8, 1997, the number of items and volume in the original inventory that was amenable to the lead decon trailer category was correctly reported as 6 and 6.59 m^3 respectively. These correct values are consistent with those reported in DOE's letter dated October 8, 1997 which provided notification to NMED that the decontamination milestone was completed for lead in the first category. The second category is the rest of the lead in this treatability group as reported in Revision 5.0, reduced by the six items transferred in Revision 5.0 to the waste category *Missing/non-existent/TBV*. The changes to the table in Section 3.4.1 of the Revision 5.0 CPV text are shown in Table C-3. The total number of items and the total net volume does not change.

Table 3. Replacement table for Section 3.4.1 in Revision 5.0 of the LANL CPV.

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net Volume (m^3)	No. Items	Net Volume (m^3)	No. Items	Net Volume (m^3)
lead for surface contamination	LA-W930	~~89~~ 6	~~21.02~~ 6.59	~~62~~ 145	~~36.16~~ 50.59	151	57.18
Totals		~~89~~ 6	~~21.02~~ 6.59	~~62~~ 145	~~36.16~~ 50.59	151	57.18

To accommodate lead wastes for surface decontamination that became covered wastes in FY97 as discussed in Item 1 above, new subgroup LA-W930-6 is proposed for Section 3.4.1 of the LANL CPV. As discussed in Item 7 below, DOE and UC are proposing new Compliance Dates for this subgroup. Therefore, in addition to the existing table in Section 3.4.1 of the December, 1997 LANL CPV, corrected as shown in Table C-3 and adjusted for FY97 covered waste inventory changes, another table for subgroup LA-W930-6 and a table for Compliance Dates for this subgroup are included in the proposed Revision 6.0 text.

6. Transfer of item from the treatability group *"Nonradioactive or Suspect Waste Items to be Surveyed,"* MWIR waste ID LA-W929 to the treatability group *"Lab Packs,"* MWIR waste ID LA-W933.

DOE and UC are requesting the reassignment of one item from the treatability group *"Nonradioactive or Suspect Waste Items to be Surveyed,"* MWIR waste ID LA-W929, to the treatability group *"Lab Packs,"* MWIR waste ID LA-W933. This item was inadvertently omitted from the original (October 4, 1995) STP covered waste inventory as reported in the March 1996 *FY95 Annual Update.* The item was formally added to the STP covered waste inventory in Revision 5.0. The transfer of this item would be consistent with the process described in Revision 4.0 for the other items that were transferred from this treatability group.

7. Addition of Compliance Dates in Sections 3.1.3 and 3.4.1 for waste that became covered waste during FY97.

DOE and UC are requesting the addition of Compliance Dates in Sections 3.1.3 and 3.4.1 for additions of waste that became covered waste during FY97. New Compliance Dates are being requested only in those cases where the additional covered waste cannot be treated within the existing Compliance Dates specified for these treatability groups. In all cases, the new Compliance Dates are intended to apply only to the newly added covered waste volume which is listed as a separate treatability subgroup (subgroup -6 of the treatability group) in the CPV text.

Section X.C.2.b. of Federal Facility Compliance Order (Los Alamos National Laboratory): Rationale for the proposed revision.

1. Changes in mixed low-level covered waste inventories to reflect increases to the STP covered waste inventory due to the addition of newly covered waste and decreases to the STP covered waste inventory due to shipments of covered wastes during FY97.

This updated STP covered waste inventory is proposed in order to make the MLLW inventory reflect the inventory as reported in the FY97 STP *Annual Update*.

Mixed waste that was generated in FY97 is not included in this Revision 6.0 request because it was not a covered waste subject to the FFCO as of September 30, 1997. Likewise, mixed waste that became STP covered waste after September 30, 1997 is not reported. The comprehensive list of all FY98 MLLW covered waste inventory changes will be reported in the FY98 STP *Annual Update* and corresponding revision request.

DOE and UC are submitting this revision request to formally incorporate covered waste volume changes, which were not already addressed in Revisions 2.0 and 5.0, into the CPV inventory as discussed in the FY97 *Annual Update*.

2. Transfer of wastes from treatability group *"Soil with heavy metals,"* MWIR waste ID LA-W904, to treatability group *"Organic-contaminated combustible solids,"* MWIR waste ID LA-W911, and to treatability group *"PCB wastes with RCRA components,"* MWIR waste ID LA-W910, as approved by NMED letter dated September 18, 1997.

These transfers are shown in Table C-1 to reflect the STP covered waste inventory changes as approved by NMED.

3. Adjustment to reflect an unused treatability study sample returned from an off-site facility in FY97.

This revision is proposed in order to make the MLLW inventory reflect the inventory as reported in the FY97 STP *Annual Update*. A drum containing soil samples contaminated with radioactive material, metals and solvents was shipped to a treatability study at the DOE Grand Junction Projects Office and was reported as a decrease in the FY 95 Update and in Revision 5.0. The unused material was returned to LANL and placed into storage in FY97. This waste volume (0.11 cubic meters) is proposed to be added to the original covered waste inventory in the STP in the treatability group, *"Organic-Contaminated Noncombustible Solids,"* MWIR waste ID LA-W919 (subgroup -0).

4. Corrections to the original (October 4, 1995) STP covered waste inventory.

This revision is proposed in order to make the MLLW inventory in the CPV reflect the results of activities resulting from characterization for shipment and the volume of waste that were treated at an off-site commercial facility. The correct volumes are shown in Table C-2. With the exception of the correction to LA-W931, notification of the shipment for treatment of these wastes was given in DOE's letters dated January 9, 1997 and January 31, 1997. The volume changes are reported in the FY97 STP *Annual Update*, Table 2-1 and Appendix B of the proposed CPV Revision 6.0.

5. Corrections to LANL STP Revision 5.0.

These revisions are proposed to correct covered waste volumes incorrectly reported in Revision 5.0 to the CPV. As discussed above, the volumes in Appendix B and the affected sections of Revision 5.0 to the CPV should be revised to reflect the accurate volumes. These corrections are made to the record, in order to ensure that the starting volumes reported in proposed Revision 6.0 are accurate and consistent. Some will not appear in the Revision 6.0 text, where subsequent changes have superseded the Revision 5.0 information.

6. Transfer of item from the treatability group *"Nonradioactive or Suspect Waste Items to be Surveyed,"* MWIR waste ID LA-W929, to the treatability group *"Lab Packs,"* MWIR waste ID LA-W933.

DOE and UC are requesting the transfer of the sole item in the treatability group *"Nonradioactive or Suspect Waste Items to be Surveyed,"* MWIR waste ID LA-W929, subgroup -5, to the treatability group *"Lab Packs,"* MWIR waste ID LA-W933. The transfer of this item would be consistent with the process described in Revision 4.0 for the other items that were transferred from this treatability group. The assignment of this waste item to an applicable treatability group will facilitate the identification of appropriate treatment technologies and it will expedite shipment of the item to the appropriate MLLW treatment and disposal facility.

Submission of this transfer request by DOE and UC completes CPV Activities 3.4.2 J and K. Activity 3.4.2 J requires that DOE and UC "*Submit documentation assigning waste items to applicable treatability groups or proposing off-site treatment dates*" by March 31, 1998. This proposed Revision 6.0 is the required documentation under this Activity. In addition, Activity 3.4.2 K requires that DOE and UC "*Propose additional compliance dates if necessary.*" No new compliance dates are being requested for the treatment of this waste item.

7. Addition of Compliance Dates in Sections 3.1.3 and 3.4.1 for waste that became covered waste during FY97.

DOE and UC are requesting the addition of Compliance Dates in Sections 3.1.3 and 3.4.1 for additions of waste that became covered waste during FY97. These new compliance dates, in Section 3.1.3 and Section 3.1.4, are being requested only in these two cases because the additional covered wastes cannot be treated within the existing Compliance Dates specified for each treatability group. The new Compliance Dates are intended to apply only to the newly added covered waste volume that became covered in FY 97, which is listed as a separate treatability subgroup in the CPV text.

Section X.C.2.c. of Federal Facility Compliance Order (Los Alamos National Laboratory): Anticipated length of any delay in performance.

DOE and UC would like the opportunity to complete treatment of some of the additional covered MLLW discussed herein. Therefore, DOE and UC are requesting that NMED advise DOE and UC immediately, should NMED believe the revision must be approved and completed prior to initiation of any shipment. Such delay could cause some wastes to remain in storage subject to the FFCO for a much longer period than is currently planned.

No delay in performance is anticipated for the inventory reported prior to this revision.

Section X.C.2.d. of Federal Facility Compliance Order (Los Alamos National Laboratory): Plan and schedule for implementing all reasonable measures.

In the event that NMED believes the approval of this revision will be delayed, DOE and UC would like the opportunity to submit an amendment or another revision request. This request would allow the specific covered wastes targeted for treatment to proceed with treatment in an expeditious manner, while this Revision 6.0 request is completed under the review and approval process.

ENCLOSURE D

REDLINE/STRIKEOUT VERSION

PROPOSED REVISION 6.0
COMPLIANCE PLAN VOLUME
TEXT

1.0 PURPOSE AND SCOPE OF THE COMPLIANCE PLAN VOLUME

1.1 Introduction

On October 6, 1992, Congress passed the Federal Facility Compliance Act (FFC Act) to address compliance by the United States Department of Energy (DOE) with the land disposal restrictions (LDR) for the storage of mixed waste set forth in Section 3004(j) of RCRA. The FFC Act requires the DOE to submit a Site Treatment Plan (STP) for developing treatment capacities and technologies to treat all of the facility's mixed waste, regardless of the time generated, to the standards promulgated pursuant to Section 3004(m) of RCRA. The FFC Act provides that the appropriate regulatory authority, the New Mexico Environment Department (NMED), may approve, approve with modifications or disapprove the STP. Prior to making such a determination, NMED is required by FFC Act to provide public notice, consider public comments, consult with the Environmental Protection Agency (EPA) and any other state in which a facility affected by the STP is located.

On March 31, 1995, DOE submitted its proposed STP to NMED for the treatment of mixed waste at the Los Alamos National Laboratory (LANL). On April 17, 1995, the public was given notice of and an opportunity to comment to NMED on the draft STP submitted by DOE. After considering public comment and otherwise complying with the FFC Act, NMED determined to approve the draft STP with modifications as provided in this document.

The STP is intended to fulfill the requirements of the FFC Act and establish an enforceable framework to allow DOE and the Regents of the University of California (Respondents) to achieve full compliance with LDR requirements under the New Mexico Hazardous Waste Act (HWA) and RCRA. The compliance dates set forth herein are enforceable time periods in which Respondents are required to develop treatment capacities and technologies, and treat or otherwise meet the requirements set forth for LDR under the HWA and RCRA. The STP will be fully implemented by a Compliance Order issued by NMED on or before October 6, 1995.

1.2 Contents

The STP contains two volumes and is intended to bring Respondents into compliance with LDR storage prohibitions under the HWA and RCRA. The Compliance Plan Volume of the STP provides overall schedules, including compliance dates, for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The Compliance Plan includes a schedule for the submittal of applications for permits, construction of treatment facilities, technology development, off-site transportation for treatment, and the treatment of mixed wastes

in full compliance with the HWA and the implementing regulations at 20 NMAC 4.1, which incorporates by reference 40 CFR Parts 260 through 270. The Background Volume of the STP contains progress reports as required in the Compliance Order. Respondents shall carry out the activities described in the STP, including the Compliance Plan Volume of the STP, in accordance with the schedules and requirements set forth in the STP and the Order.

1.3 STP Revisions and Amendments

The STP Compliance Plan Volume (CPV) has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order (FFCO), as amended and revised. Appendix A to the CPV provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

2.0 Compliance Schedules

The STP provides overall schedules for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The schedules include those activities required to bring existing waste treatment technologies into operation, process backlogged and currently generated waste, include schedules required to develop new facilities and capacity for treatment and establish an overall time frame for achieving compliance with the LDR requirements under the HWA and 20 NMAC 4.1.

2.1 Categories of Activities for Compliance Dates

The categories of activities for which compliance dates will be provided for different types of treatment approaches in the STP are listed in the tables below. The categories of activities are based on Section 3021(b)(1)(B)(I), (ii), and (iii) of the RCRA, to the extent appropriate.

2.1.1 Plans Where Treatment Technology Exists

For most of the mixed waste, treatment technologies have been identified and developed. For the waste that will be treated on-site, the categories of activities for compliance dates identified in Table I shall apply. Compliance dates for the activities identified in Table I may be found in Section 3.1.

Table I. Categories of Activities for Compliance for Mixed Waste with Existing Treatment Technologies.

A.	Submit permit applications to the NMED.
B.	Initiate construction as specified in the NMED permit.
C.	Complete system testing and commence operation.
D.	Begin treating mixed waste.
E.	Complete treatment of existing wastes to applicable regulatory standards.

2.1.2 Plans Where Technology Must Be Developed

For some mixed waste, no treatment technologies have been identified and developed, or the treatment technology must be modified or adapted to apply to such waste. For the waste that will be treated on-site, the categories of activities for compliance dates are identified in Table II and shall apply. Compliance dates for the activities identified in Table II may be found in Section 3.2.

Table II. Categories of Activities for Compliance Dates for Mixed Waste Without Existing Treatment Technologies.

A. Identify and develop technology.
B. Submit permit application to NMED; or
C. Submit a Notification of Intent to perform treatability study to NMED a minimum of 45 days prior to commencement of the study.
D. Initiate construction as specified in the NMED.
E. Commence systems testing.
F. Begin treating mixed waste.
G. Complete treatment of existing wastes to applicable regulatory standards.

2.1.3 Requirements Pertaining to Radionuclide Separation

The FFC Act sets additional requirements in cases in which DOE intends to conduct radionuclide separation of mixed waste. Should the DOE determine to do radionuclide separation of such mixed waste, DOE will schedule specific compliance dates based on category activities identified in Table III. "Radionuclide separation" shall mean segregating the radioactive portion of the mixed waste from the hazardous portion of the mixed waste.

Table III. Categories of Activities for Compliance Dates for Radionuclide Separation of Mixed Waste

A.	Complete an estimate of the volume of waste generated by each case of radionuclide separation.
B.	Complete an estimate of the volume of waste that would exist or be generated without radionuclide separation.
C.	Complete an estimate of the costs of waste treatment and disposal if radionuclide separation is used compared with the estimated costs if it is not used.
D.	Provide the assumptions underlying such estimates of waste volumes and cost estimates.
E.	Provide characterization methodologies for determining waste type.
F.	Submit a plan for treating or managing hazardous waste residues, accompanied by a NMED permit application.

2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment

In lieu of plans to treat mixed-waste on-site, DOE may treat waste at an off-site facility (at a commercial or non-commercial mixed waste treatment facility), or DOE may recycle waste at an off-site facility. Should DOE elect to use off-site recycling facilities in lieu of (or in combination with) treatment, it will follow the requirements prescribed in this Section in the same manner as if

the waste was being shipped off-site for treatment. Any and all requirements imposed by the off-site treatment/recycling facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment/recycling site shall be met by Respondents.

DOE shall notify the NMED Project Manager in writing as soon as possible if mixed waste is planned to be sent to a non-commercial facility. Notification should be made if possible when DOE is first considering such an option to allow NMED and the state to address any state issues or concerns with other states. The NMED Project Manager shall approve in writing the proposed off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility. Activities for mixed waste to be shipped off-site for treatment/recycling at a non-commercial facility are identified in Table V.

Should DOE decide to treat or recycle waste at a commercial off-site facility, DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility.

Table IV. Activities for Mixed Waste to be Shipped Off-Site for Treatment or Recycling at a Commercial facility

A.	Meet all regulatory requirements for off-site shipment.
B.	Provide documentation to NMED that waste has been received at an off-site facility for treatment or recycling within 45 working days of receipt of waste at the treatment facility.

2.1.4.1 Specific Site Requirements for Non-commercial Treatment Facilities

Shipment to Idaho National Engineering Laboratory

Prior to shipment, Idaho National Engineering Laboratory and Idaho Division of Environmental Quality shall be notified of any pending shipments of waste prior to shipment should DOE ship mixed low-level waste to INEL. Proper procedures including additional approvals (if necessary) and documentation shall be completed prior to the shipment of wastes to INEL. Management of post-treatment waste residuals or newly generated waste streams will be in accordance with the requirements of DOE, the State of Idaho and that state where they will be disposed. A modification to LANL's RCRA permit providing for the return of such wastes and/or residues to LANL must be approved by NMED prior to any such return of wastes and/or residuals to LANL. DOE will notify the NMED Project Manager in writing as soon as possible, and in any

event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams from INEL.

Shipments of low-level mixed wastes to planned facilities (not yet existing) will occur only after that treatment and schedules are approved by DOE-ID and the State of Idaho. Upon approval of the planned treatment facilities, the applicable protocol from the paragraph above will be implemented for mixed wastes to be treated at planned facilities.

Shipment to Oak Ridge Reservation

In the case that Oak Ridge Reservation (ORR) may not dispose of mixed-waste residues or new waste streams generated from off-site treatment, and they cannot be sent to another facility for disposal, then the residues may return to LANL. Should residual or newly generated waste streams be returned to LANL, the proper permits for the State of New Mexico must exist. DOE will notify the NMED Project Manager in writing as soon as possible, and in any event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams from ORR.

Table V. Activities for Mixed Waste to be Shipped Off-Site for Treatment or Recycling at a Non-commercial facility

A.	Request necessary approval from NMED for shipment of waste by category before shipping.
B.	Meet all regulatory requirements for off-site shipment.
C.	Provide documentation to NMED of confirmation of shipment date within 14 working days prior to sending waste to an off-site facility for treatment, disposal, or recycling, or storage pending treatment, disposal, or recycling.
D.	Provide documentation to NMED that waste has been received at an off-site facility for treatment within 45 working days of receipt of waste at the off-site facility.
E.	Meet all regulatory requirements to include RCRA Permit modifications for residual or newly generated waste streams after treatment or recycling.
F.	Provide documentation to NMED within 30 working days after receipt of residual or newly generated waste streams upon return to LANL.

2.1.5 Plans Related to Other Mixed Waste Activities

1. Activities other than the types of activities specifically called for in the FFC Act as requiring schedules are described in this STP. Some of these activities may be associated

with schedules which may contain compliance dates related to treatment of the DOE's mixed waste.

2. For mixed waste which is not sufficiently characterized to allow identification of appropriate treatment, notification of the characterization of such waste shall be in accordance with the annual update process described in the Compliance Order. If such characterization results in the addition or deletion of a treatability group or an increase in volume in a treatability group, a revision would be required pursuant to Section X of the Compliance Order.

3.0 LOW-LEVEL MIXED WASTE STREAMS

This Chapter presents proposed schedules for treatment technologies and the preferred options to treat low-level mixed waste streams (MLW or LLMW) at LANL. All preferred options not described below must be approved by NMED in accordance with the revision process pursuant to the Compliance Order.

The original October 4, 1995 STP inventory in each MLLW treatability group has been modified through the revision process in the FFCO. The table in CPV Appendix B provides a comprehensive summary of changes to the CPV covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of this revision. In Appendix B, the original STP inventory in each MLLW treatability group is denoted as subgroup 0 of that treatability group (e.g., the original volume of STP treatability group LA-W906 became LA-W906-0). Each revision that has since added volumes to individual treatability groups has resulted in creation of an additional subgroup, having the same number as the revision (e.g., LA-W906-4 was created in Revision 4.0, and LA-W906-5 was created in Revision 5.0).

In most Sections of this chapter, the subgroups of the treatability groups are not shown. In those cases, the Activities and Compliance Dates are applicable to the entire net volume of that treatability group. However, when subgroups of a treatability group have been assigned Activities and Compliance Dates unique to that subgroup, those subgroups are detailed in the text. For a complete listing of volumes by subgroup for all treatability groups, please refer to Appendix B.

3.1 Mixed Waste Streams for Which Technology Exists

The following subsections summarize LLMW treatability groups for which technology exists.

3.1.1 Off-site Treatment by Thermal Treatment

Treatability Group(s):

LLMW for ~~Off-site~~ Thermal Treatment (MWIR Treatment ID DS-S001)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
IPA wastes	LA-W901	D001, D009, F002, F003, F005	0 ~~7~~	0.00 ~~0.02~~
scintillation fluids	LA-W902	D001, F003, F005	0 ~~1~~	0.00 ~~0.0038~~
Totals			**0 ~~8~~**	**0.00 ~~0.02~~**

Treatment Technology:

The waste will be treated at an off-site facility that combusts organic liquid waste. Should DOE decide to treat waste at an off-site non-commercial facility, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	9/30/96
B. Complete shipping waste	12/30/96
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.2 Off-site Treatment by Stabilization or Macroencapsulation

Treatability Group(s):

LLMW for Stabilization

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (M^3)
lead blankets	LA-W903	D007, D008	0	0.00
soil with heavy metals	LA-W904	D004, D005, D006, D007, D008, D009, D010, D011	3 59	0.45 ~~10.44~~ ~~10.54~~[a]
ER soils	LA-W905	D028, D029, F001, F005 D010, D011	0	0.00
Totals			3 59	0.45 ~~10.44~~ ~~10.54~~[a]

~~[a] These redlined and struckout values represent corrections to CPV Revision 5.0 as discussed in the request for Revision 6.0. The struckout numbers are the incorrect Revision 5.0 values, the redline and struckout numbers are the corrected Revision 5.0 values which are replaced by the Revision 6.0 values (redline only). This footnote is information for the reader of this redline/strikeout version; this footnote is struck out to ensure it is deleted in the clean copy of the CPV Revision 6.0.~~

Treatment Technology:

The waste will be treated at an off-site facility that stabilizes or macroencapsulates wastes. Should DOE decide to treat waste at an off-site non-commercial facility, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	05/30/97
B. Complete shipping waste	12/30/98
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.3 Evaporative Oxidation (MWIR Treatment ID GJ-S801C)

Treatability Group(s):

LLMW for Evaporative Oxidation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906-0 LA-W906-4 LA-W906-5	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D030, D032, D033, D034, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	173	10.32[a] ~~10.89~~
Totals			**173**	**10.32[a]** ~~**10.89**~~

~~[a] These redlined and struckout values represent corrections to CPV Revision 5.0 as discussed in the request for Revision 6.0. The struckout numbers are the incorrect Revision 5.0 values and the redline numbers are the corrected Revision 5.0 values. This footnote is information for the reader of this redline/strikeout version; this footnote is struck out to ensure it is deleted in the clean copy of the CPV Revision 6.0.~~

Note: See below for additional wastes in this treatability group

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site treatment facility (commercial or non-commercial) and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	12/30/96
B. Initiate construction	As specified in the NMED permit.
C. Complete system test and commence operation and begin treating mixed waste	6/19/99
D. Complete treatment of existing wastes to applicable regulatory standards, or	2/09/00
E. Complete shipment of existing wastes for treatment to an off- site facility.	2/09/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes

The following additional wastes will require management in this category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906-6	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D030, D032, D033, D034, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	88	5.74
Totals			**88**	**5.74**

Activities for wastes belonging to this treatability subgroup.

Activity	Compliance Dates
G. Complete shipment of existing wastes for treatment to an off- site facility.	2/09/03
H. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.4 Thermal Desorption (MWIR Treatment ID GJ-S801B)

LLMW for Thermal Desorption/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
organic-contaminated combustible solids	LA-W911	D001, D004, D008, D009, F001, F002, F003, F005	381 ~~378~~	36.07 ~~35.65~~
Totals			**381 ~~378~~**	**36.07 ~~35.65~~**

LLMW for Thermal Desorption

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
organic-contaminated noncombustible solids	LA-W919	D001, D003, D004, D005, D006, D007, D008, D009, D010, D011, D012, D015, D018, D019, D020, D022, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D042, D043, F001, F002, F003, F004, F005	227 ~~177~~	27.31 ~~18.62~~
Totals			227 ~~177~~	27.31 ~~18.62~~

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	11/16/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	02/01/01
D. Complete treatment of existing wastes to applicable regulatory standards, or	02/14/02
E. Complete shipping of existing wastes to an off-site treatment facility.	02/14/02
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.5 Macroencapsulation (MWIR Treatment ID PX-S803)

Treatability Group(s):

LLMW for Macroencapsulation/Off-site treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
combustible debris	LA-W912	D001, D002, D003, D005, D006, D007, D008, D009, D011, D035, F001, F002, F003, F005	103 ~~97~~	15.17 ~~14.85~~
Totals			**103 ~~97~~**	**15.17 ~~14.85~~**

LLMW for Macroencapsulation

Treatability group		RCRA codes	Number of items	Net volume (m^3)
activated or inseparable lead	LA-W921	D008	34 ~~32~~	7.09 ~~8.12~~
noncombustible debris	LA-W922	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011	191 ~~157~~	36.46 ~~30.74~~
Totals			**225 ~~189~~**	**43.55 ~~38.86~~**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/04/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operation and begin treating mixed waste	02/01/00
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/25/00
E. Complete shipping of existing wastes to an off-site treatment facility.	08/25/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.6 Chemical Plating Waste Treatment Skid (MWIR Treatment ID LA-S004)

Treatability Group(s):

LLMW for Chemical Plating Waste Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous wastes with heavy metals	LA-W913	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011	139 ~~119~~	3.07 ~~2.05~~
corrosive solutions	LA-W914	D001, D002	197 ~~189~~	1.21 ~~1.17~~
aqueous cyanides, nitrates, chromates, and arsenates	LA-W915	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, F007, P029, P098	23	0.17
Totals			**359 ~~331~~**	**4.45 ~~3.39~~**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any

event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Resubmit revised permit application to NMED	10/30/96
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	03/17/00
D. Complete treatment of existing wastes to applicable regulatory standards, or	05/08/01
E. Complete shipping of existing wastes to an off-site treatment facility.	05/08/01
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.7 Water-reactive Metals Treatment Skid (MWIR Treatment ID LA-S003)

Treatability Group(s):

LLMW for Water-Reactive Metals Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
water-reactive wastes	LA-W916	D001, D003, D004, D005, D007, D008, D010, D011	113 ~~108~~	7.05 ~~6.37~~
Totals			**113 ~~108~~**	**7.05 ~~6.37~~**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	06/30/01
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	09/09/03
D. Complete treatment of existing wastes to applicable regulatory standards, or	04/21/04
E. Complete shipping of existing wastes to an off-site treatment facility.	04/21/04
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.8 Gas-scrubbing Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas-Scrubbing Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
compressed gases requiring scrubbing	LA-W917	D001, D002, P056	13	0.35
Totals			**13**	**0.35**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/28/03
E. Complete shipping of existing wastes to an off- site treatment facility.	08/28/03
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.9 Gas Oxidation Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas Oxidation Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
compressed gases requiring oxidation	LA-W918	D001, U226	177 ~~176~~	1.32
Totals			**177 ~~176~~**	**1.32**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/28/03
E. Complete shipping of existing wastes to an off-site treatment facility.	08/28/03
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.10 Mercury Amalgamation (MWIR Treatment ID PI-S801)

Treatability Group(s):

LLMW for Amalgamation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
elemental mercury	LA-W920	D006, D009, F005	79 ~~74~~	0.66 ~~0.54~~
Totals			**79 ~~74~~**	**0.66 ~~0.54~~**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/30/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	06/05/00
D. Complete treatment of existing waste to applicable regulatory standards, or	11/15/00
E. Complete shipping of existing wastes to an off-site treatment facility.	11/15/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.2 Mixed Waste Streams for Which Technology Requires Adaptation or for Which No Technology Exists

The following subsections summarize mixed waste streams for which technology requires adaptation or for which no technology exists.

3.2.1 Hydrothermal Processing

Treatability Group(s):

LLMW for Hydrothermal Processing/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
halogenated organic liquids	LA-W907	D001, D002, D003, D007, D009, D010, D011, D018, D019, D022, D028, D029, D035, D043, F001, F002, F003, F004, F005, U077, U080, U226, U227, U228, U236	525 ~~512~~	18.26 ~~18.12~~
nonhalogenated organic liquids	LA-W908	D001, D002, D003, D004, D007, D008, D009, D011, D018, D038, D040, F002, F003, F004, F005, U002, U019, U154, U169, U188, U220, U246	843 ~~814~~	20.20 ~~20.63~~
bulk oils	LA-W909	D002, D004, D005, D006, D007, D008, D009, D010, D011, D021, D027, D039, F001, F002, F003, F005	45 ~~64~~	5.81 ~~7.51~~
PCB wastes with RCRA components	LA-W910	D004, D005, D006, D007, D008, D009, D010, D011, D012, D015, D019, D027, D028, D030, D031, D032, D033, D034, D036, D039, D042, D043, F002, F003, F004, F005	40 ~~4~~	2.75 ~~0.74~~
Totals			**1453 ~~1394~~**	**47.02 ~~47.00~~**

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
Liquid and solid oxidizers	LA-W923	D001, D003, D005	93 ~~86~~	1.37 ~~0.58~~
Totals			**93 ~~86~~**	**1.37 ~~0.58~~**

Treatment Technology:

The preferred destruction treatment technology option for this treatability group is Hydrothermal Processing which is a technology that needs development for adaptation to treat radioactive and PCB-bearing waste. This treatment technology is being adapted at LANL and is expected to be developed into a mobile treatment unit. The GJPO schedule for deployment of the unit indicates its possible availability to LANL after February 2002. Shipment off-site for treatment is a parallel preferred option. Respondents shall submit treatment or off-site shipment schedules and

options for NMED's approval by November 30, 1998. Treatment or other options other than off-site shipment shall be carried out pursuant to the revision process. Off-site shipments must be completed by February 2002.

Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

3.3 Mixed Waste Requiring Further Characterization or for Which Technology Assessment Has Not Been Done (MWIR Treatment ID LA-S701)

Treatability Group(s):

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
lead wastes - TBD	LA-W924	D003, D008	129	40.16
mercury wastes - TBD	LA-W925-0	D007, D008, D009, F001	63	18.30
compressed gases - TBD	LA-W926	D001, D007, D009, D022, P056, U080, U226	10	1.25
biochemical laboratory wastes	LA-W927	D001, D003	9	1.34
dewatered treatment sludge	LA-W928	see Subsection 3.3 in the Background Volume	61	12.71
Totals			**272**	**73.76**

Note: See below for additional wastes in some of these treatability groups

Treatment Technology:

The following steps will be taken to properly characterize this waste:

- Conduct additional generator interviews
- Prepare a sampling plan for waste not adequately characterized

- Conduct sampling and analysis
- Determine treatment options

Activities for wastes originally belonging to these treatability groups as listed above.

Activity	Compliance Dates
A. Complete generator interviews	10/30/95
B. Complete sampling and analysis plan	1/30/96
C. Complete sampling and analysis	9/30/98
D. Complete determination of treatment options	12/20/98
E. Complete shipping of existing wastes to an off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups.	12/20/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes and treatability groups:

The following additional wastes will require management in this category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	RCRA Codes	Number of items	Net volume (m3)
mercury wastes-TBD	LA-W925-4 LA-W925-5 LA-W925-6	D003, D007, D008, D009, F001, F002, F005	74 ~~37~~	2.61 ~~0.42~~
~~mercury wastes-TBD~~	~~LA-W925-5~~	~~D007, D008, D009, F001~~	~~14~~	~~1.52~~
explosives	LA-W932	D003	1	0.000001
labpacks	LA-W933	D001, D002, D003, D004, D005, D006, D007, D008, D010, F003, F005, D011, P012, P029, P098, P106, P113, P120, U131, U144, U145, U188, U190, U204, U216, U219	149 ~~142~~	0.30
Totals			**224** ~~**194**~~	**2.91** ~~**2.24**~~

Activities for wastes belonging to these treatability groups and subgroups.

Activity	Compliance Dates
G. Complete sampling and analysis plan	1/30/99
H. Complete sampling and analysis	9/30/01
I. Complete determination of treatment options	12/20/01
J. Complete shipping of wastes to an off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups	12/20/03
K. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at off-site facility

3.4 Plans for Other Types of Activities

The following subsection summarizes plans for other types of activities.

3.4.1 Lead Decontamination (MWIR Treatment ID LA-S001)/Off-site Treatment (preferred option)

Treatability Group(s):

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net volume (m^3)	No. Items	Net volume (m^3)	No. Items	Net volume (m^3)
lead for surface contamination	LA-W930-0 LA-W930-5	0 ~~89~~ ~~6~~[a]	0.00 ~~21.02~~ ~~6.59~~[a]	134 ~~62~~ ~~145~~[a]	49.19 ~~36.16~~ ~~50.59~~[a]	134 ~~151~~	49.19 ~~57.18~~
Totals		**0** ~~89~~ ~~6~~[a]	**0.00** ~~21.02~~ ~~6.59~~[a]	**134** ~~62~~ ~~145~~[a]	**49.19** ~~36.16~~ ~~50.59~~[a]	**134** ~~151~~	**49.19** ~~57.18~~

~~[a] These redlined and struckout values represent corrections to CPV Revision 5.0 as discussed in the request for Revision 6.0. The struckout numbers are the incorrect Revision 5.0 values, the redline and struckout numbers are the corrected Revision 5.0 values which are replaced by the Revision 6.0 values (redline only). This footnote is information for the reader of this redline/strikeout version; this footnote is struck out to ensure it is deleted in the clean copy of the CPV Revision 6.0.~~

Note: See below for additional wastes in this treatability group

Treatment Technology:

This treatability group contains two categories of lead for decontamination:

- The first category is lead in the original LA-W930-0 inventory that is amenable to decontamination in the on-site lead decontamination trailer, which was designed to decontaminate simple lead shapes, such as lead bricks, of certain physical dimensions. The trailer is on-site and has operated, but needs an upgrade for prolonged operation.

- The lead in the second category is lead in the original LA-W930-0 inventory that is not amenable to decontamination in the on-site lead decontamination trailer, plus subsequent additions to the original inventory shown in Appendix B. This lead will be processed using other on-site decontamination processes, such as dry sandblasting or hand-scrubbing, or sent to off-site lead decontamination services.

Any lead not acceptable for on-site or off-site lead decontamination, plus any lead unsuccessfully decontaminated, will be designated for treatment and disposal at an off-site facility, or for recycle through an off-site capability, such as metal melting to create shielding blocks or a DOE lead bank. Non-conforming items will be reassigned to appropriate treatability groups in accordance with the FFCO.

Should DOE decide to treat or recycle waste at an off-site non-commercial facility in lieu of plans to treat or recycle such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment/recycle option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment/ recycling facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment/recycling site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility.

Lead shapes and forms in the first category.

Activity	Compliance Date
A. Complete lead decontamination	09/30/97

Lead shapes and forms in the second category.

Activity	Compliance Date
A. Provide schedule for development of lead processing techniques and options	06/30/96
B. Segregate lead waste into decontamination groupings	07/31/97
C. Complete shipment of wastes to decontamination operations, or	12/02/98
D. Determine treatment/disposal or other recycle options for lead waste not acceptable for decontamination	12/02/98
E. Complete treatment/disposal operations or other recycle operations for lead waste not acceptable for decontamination	07/31/99
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes

The following additional wastes will require management in the second category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net volume (m^3)	No. Items	Net volume (m^3)	No. Items	Net volume (m^3)
lead for surface contamination	LA-W930-6	0	0.00	14	12.06	14	12.06
Totals		**0**	**0.00**	**14**	**12.06**	**14**	**12.06**

Activities for wastes belonging to this treatability subgroup.

Activity	Compliance Date
G. Complete shipment of wastes to decontamination operations, or	12/02/99
H. Determine treatment/disposal or other recycle options for lead waste not acceptable for decontamination	12/02/99
I. Complete treatment/disposal operations or other recycle operations for lead waste not acceptable for decontamination	07/31/00
J. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.4.2 Sorting, Surveying, and Decontamination (MWIR Treatment ID GJ-S804)

Treatability Group(s):

Treatability group	MWIR waste ID	Number of items	Net volume (m^3)
1. nonradioactive or suspect waste items to be surveyed	LA-W929-0(1)	0	0.0
2. nonradioactive or suspect waste items to receive RCRA and radiological characterization	LA-W929-0(2)	0 ~~2~~	0.00 ~~0.0076~~
3. nonradioactive or suspect waste items that cannot or should not be sampled	LA-W929-0(3)	0	0.0
Totals		**0 ~~2~~**	**0.00 ~~0.0076~~**

Note: See below for additional wastes in this treatability group

Treatment Technology:

The waste items in part 1 of the original volume in this treatability group will be surveyed using a field operation that will survey waste suspect of radioactive contamination to determine whether it is radioactively contaminated. The work will be done on-site with equipment and staffing provided by LANL or another DOE site. Waste determined not to be radioactively contaminated will be treated using commercial facilities permitted to treat hazardous waste; waste determined to be radioactively contaminated will be assigned to applicable treatability groups and/or sent to offsite facilities for appropriate treatment.

Waste items in part 2 of this treatability group will be surveyed using complete RCRA and radiological sampling and characterization. Waste sampled under this alternative will be treated and disposed as low-level mixed waste; the waste will be assigned to applicable treatability groups and/or sent to off-site facilities for appropriate treatment based on the results of this characterization.

Sampling for this characterization alternative will be conducted in accordance with RCRA SW-846 methods. To ensure an adequate volume of waste material is available for sampling and to maximize the cost effectiveness of the sampling activities, some lab packed and other waste items may be bulked into larger volume containers; all RCRA waste codes will be transferred to the bulked wastes to ensure correct RCRA categorization is maintained. It may be found, when preparing a given drum for sampling, (for example, solid small volume waste items that cannot be sampled in accordance with EPA SW-846 methods) are in fact not amenable to sampling and should have been included in the item count for group 3 . If visual inspection so indicates, these waste items will be transferred to Group 3 and assigned to applicable treatability groups based on existing knowledge.

Waste items in part 3 of this treatability group which are confirmed not amenable to sampling (e.g., lead-acid batteries, spray paint cans) will be assigned to applicable treatability groups based on existing knowledge. It may be found, when inspecting a given drum, that some items can in fact be sampled in accordance with EPA SW-846 methods and should have been included in the item count for Group 2. If visual inspection so indicates, these waste items will be transferred to Group 2 and sampled accordingly.

Additional compliance dates will be proposed for any waste items in this treatability group found not to have available treatment/disposal options following a complete review of all survey, analytical, or visual inspection data obtained through these processes.

For all waste items in this treatability group, shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within (45) working days of receipt of waste at the treatment facility.

Activities for waste items in part 1 of this treatability group.

Activity	Compliance Dates
A. Complete field survey	10/30/96
B. Submit documentation declaring waste items as nonradioactive, or submit documentation assigning waste items to applicable treatability groups	2/28/97
C. Propose additional compliance dates if necessary	4/30/97

Activities for waste items in part 2 of this treatability group.

Activity	Compliance Dates
D. Complete RCRA and radiological sampling	1/28/97
E. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	2/28/97
F. Propose additional compliance dates if necessary	4/30/97

Activities for waste items in part 3 of this treatability group.

Activity	Compliance Dates
G. Complete visual verification	1/28/97
H. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	6/30/97
I. Propose additional compliance dates if necessary	9/30/97

Additional wastes:

Treatability group	MWIR waste ID	Number of items	Net volume (m^3)
Nonradioactive or suspect waste items	LA-W929-5	0 ~~1~~	0.00 ~~0.00002~~
Totals		**0 ~~1~~**	**0.00 ~~0.00002~~**

Activities for items added as subgroup 5 of this treatability group.

Activity	Compliance Dates
J. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	3/31/98
K. Propose additional Compliance Dates if necessary	3/31/98

3.5 Management of "Missing" Items.

Waste Category:

Category	MWIR waste ID	No. Items	Net volume (m^3)
Missing/nonexistent/TBV	None	48	8.81
Totals		**48**	**8.81**

Treatment Technology:

During visual inspections and sampling activities in support of STP waste work-off, occasionally an item cannot be found, or it is not located in the containers in which it is expected to be, according to the LANL data files for the waste item. In some instances, such items could not be verified as having ever been received in storage at LANL, and further follow-up investigations of the record files revealed that for various reasons, the waste items were never in fact generated, although on paper they were included in the original STP inventory.

In these instances, DOE and UC, and their contractors, perform a thorough inspection of both the physical inventories and the data files. When DOE and UC determine that an STP covered waste item does not exist, transfer of the item to the category called *"Missing/ nonexistent/TBV (*to be verified*)"*, is requested through the revision process associated with the next *Annual Update.*

DOE and UC will re-verify the absence of all *"Missing/ nonexistent/TBV"* items container-by-container, as each STP waste item is being sampled, repackaged, or otherwise prepared for on- or off-site treatment. The final verification that all *"Missing/ nonexistent/TBV"* items do not in fact exist will be completed by April 21, 2004, at which time all remaining MLLW items in the original STP inventory will have been treated. At that time, DOE and UC will request deletion of all items having been fully verified as missing or nonexistent.

At any time during the re-verification process, should any of these items be discovered to exist, NMED will be notified, and approval will be requested for assignment of the rediscovered items to the appropriate TG. If necessary, they will be assigned new Activities and Compliance Dates, in accordance with the terms of the FFCO.

The following steps will be taken to verify presence or absence of this waste:

Activity	Compliance Dates
A. Initiate re-verification process on a shipment-by-shipment basis	01/03/98
B. Complete re-verification process	04/21/04
C. Re-assign any existing items to appropriate treatability groups	04/21/04
D. Complete treatment of existing wastes to applicable regulatory standards, or	10/30/04
E. Complete shipping of existing wastes to an off-site treatment facility	10/30/04
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

4.0 MIXED TRANSURANIC WASTE

Treatment Group(s):

Assorted Mixed Transuranic Waste

Treatment Technology

Respondents are required to develop treatment technologies and treat mixed transuranic (MTRU) waste at LANL according to the schedule set forth below:

Activity	Compliance Date
A. Development of treatment technologies	June 30, 1999
B. Submit permit application amendment or modification to NMED for treatment of MTRU	December 31, 1999
C. Begin treating MTRU	Six (6) months after NMED permit issuance
D. Complete treatment of existing MTRU to applicable regulatory standards	December 31, 2010

The above schedule is not based on the assumption that WIPP will be a disposal option or that DOE will receive a variance from treatment standards for land disposal of MTRU waste to be disposed at WIPP. All revisions to compliance dates shall be in accordance with the procedures set forth in the compliance order.

CPV APPENDIX A
HISTORY OF STP REVISIONS AND AMENDMENTS

As discussed in CPV Section 1.3, the STP Compliance Plan Volume has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order, as amended and revised. This Appendix provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

To date, there have been six revisions and two amendments to the CPV. In addition, the FFCO was amended once, on May 20, 1997. The following Table A-1 provides a summary of these changes. More detailed descriptions can be found in the CPV Update portion of each year's STP *Annual Update,* and the original correspondence requesting each change.

Table A-1. SUMMARY OF CHANGES TO THE CPV AND THE FFCO

Action	Document Modified	Effective Date	Effect on FFCO/STP
Rev. 1.0	STP/CPV	6/12/96	Added off-site treatment as a parallel preferred option for most MLLW treatability groups
Rev. 2.0	STP/CPV	12/9/96	Reduced volume of LA-W928 by approving reclassification of sludges as LLW
Amendment 1.0	STP/CPV	10/30/96	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Rev. 3.0	STP/CPV	1/27/97	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Amendment 1.0	FFCO	5/20/97	Modified FFCO Sections IV, V, IX, and X to streamline waste transfers and deletions
Amendment 2.0	STP/CPV	9/4/97	Extended CPV Activity 3.1.2B Compliance Date to 12/29/97
Rev. 4.0	STP/CPV	*12/29/97* ~~*(to be added)*~~	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added treatability groups, and deleted treated items
Rev. 5.0	STP/CPV	*12/29/97* ~~*(to be added)*~~	Added volumes reported in FY95 and FY96 *Annual Updates* (and certain other items) to several treatability groups, added Activities and Compliance Dates, added CPV Appendices, and deleted treated items
Rev. 6.0	STP/CPV	*(to be added)*	Added volumes reported in FY97 *Annual Update* to several treatability groups, added Activities and Compliance Dates, adjusted several original inventory volumes, transferred one LA-W929 item to a new treatability group, and deleted treated items

CPV APPENDIX B
SUMMARY OF CPV INVENTORY CHANGES

The following tables provides a comprehensive summary of changes to the CPV covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of this revision. The volumes given in the tables reflect changes to the individual MLLW treatability group volumes due to increases or decreases, as noted. Table B-1 reports the inventory changes arising from Revision 6.0, while Table B-2 reports the inventory changes previously approved.

Key to Reading the Subgroups

The original STP inventory in each MLLW treatability group is now denoted as subgroup -0 of that treatability group (e.g., the original volume of STP treatability group LA-W906 became LA-W906-0). The original October 4, 1995 STP inventory in each MLLW treatability group has been modified through the revision process in the FFCO. The following revisions have affected volumes in individual treatability groups to date:

Revision	Effect on Volumes
Rev. 2.0	Reduced volume of LA-W928
Rev. 3.0	Divided original volume of LA-W929 into three subgroups
Rev. 4.0	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added new treatability groups
Rev. 5.0	~~Added~~ Increased and decreased volumes in ~~to~~ several treatability groups
Rev. 6.0	Increased and decreased volumes in several treatability groups, transferred the volume in LA-W929-5 to another treatability group

Each revision that has added volumes to individual treatability groups has resulted in creation of an additional subgroup of that treatability group, having the same number as the revision (e.g., LA-W906-4 was created in Revision 4.0, and LA-W906-5 was created in Revision 5.0).

Additions and Deletions to Date

To date, MLLW inventory increases and decreases have been incorporated into the covered waste inventories through Revisions 2.0, 4.0, ~~and~~ 5.0, and 6.0. Revision 2.0 incorporated decreases in treatability group LA-W928 due to deletion of covered waste items. Rev. 4.0 resulted in decreases to LA-W929 and increases in other TGs, primarily by transferring LA-W929 items to other TGs. Rev. 5.0 and 6.0 resulted in both additions to and deletions of covered waste volumes (i.e., increases and decreases) in a number of TGs. Therefore, the

Appendix B tables that follows shows that subgroups -4, ~~and~~ -5, and -6 exist for some treatability groups, but not for all.

These ~~This~~ tables provides a master list of MLLW inventory changes presented in the *Annual Updates,* to enable users of the STP to track all changes in the LANL MLLW covered waste inventory that occurred since the original STP inventory was established in the October 4, 1995 FFCO/CPV.

Changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY97 ~~FY96~~. However, only those reported as of Rev. 6.0 ~~5.0 "*Other Changes*"~~ are included in this table. All others will be reported in the next *Annual Update* and associated revision request. Therefore, the *"Net Covered Waste Inventory"* may not fully reflect the actual CPV covered waste inventory as of the date of this revision, in some instances.

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.1	IPA Wastes	LA-W901-0	7	0.02	Decrease 7	Decrease 0.02			0	0.00	0	0.00
3.1.1	Scintillation Fluids	LA-W902-0	1	0.0038	Decrease 1	Decrease 0.0038			0	0.00	0	0.00
3.1.2	Lead Blankets	LA-W903-0	0	0.00					0	0.00	0	0.00
3.1.2	Soil with Heavy Metals	LA-W904-0	58	~~10.33~~ 10.43[a]	Decrease 6 Decrease 2 Decrease 46 Decrease 2	Decrease 0.62[b] Decrease 0.42[c] Decrease 8.91 Decrease 0.14			2	0.34		
		LA-W904-5	1	0.11					1	0.11	3	0.45
3.1.2	ER Soils	LA-W905-0	0	0.00					0	0.00	0	0.00

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.3	Aqueous Organic Liquids	LA-W906-0	45	1.65					45	1.65		
		LA-W906-4	27	0.36					27	0.36		
		LA-W906-5	101	~~8.88~~ 8.31[d]					101	8.31		
		LA-W906-6	0	0.00	Increase 88	Increase 5.74			88	5.74	261	16.06
3.1.4	Organic-Contaminated Combustible Solids	LA-W911-0	305	28.10	Increase 2	Increase 0.42[c]			307	28.52		
		LA-W911-4	33	0.68					33	0.68		
		LA-W911-5	40	6.87					40	6.87		
		LA-W911-6	0	0.00	Increase 1	Increase 0.0038			1	0.0038	381	36.07
3.1.4	Organic-Contaminated Noncombus-tible Solids	LA-W919-0	79	7.71	Increase 1	Increase 0.11[e]			80	7.82		
		LA-W919-4	9	0.38					9	0.38		
		LA-W919-5	89	10.53					89	10.53		
		LA-W919-6	0	0.00	Increase 49	Increase 8.58			49	8.58	227	27.31

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.5	Combustible Debris	LA-W912-0	83	13.82					83	13.82		
		LA-W912-4	9	0.75					9	0.75		
		LA-W912-5	5	0.28					5	0.28		
		LA-W912-6	0	0.00	Increase 6	Increase 0.32			6	0.32	103	15.17
3.1.5	Activated or Inseparable Lead	LA-W921-0	14	4.77	Decrease 1 Decrease 2	Decrease 0.06[f] Decrease 1.72			11	2.99		
		LA-W921-5	18	3.35	Decrease 4	Decrease 0.83[f]			14	2.52		
		LA-W921-6	0	0.00	Increase 9	Increase 1.58			9	1.58	34	7.09
3.15	Non-combustible Debris	LA-W922-0	41	5.62	Decrease 14	Decrease 2.915			27	2.71		
		LA-W922-4	53	2.83					53	2.83		
		LA-W922-5	63	22.29	Decrease 3	Decrease 0.62			60	21.67		
		LA-W922-6	0	0.00	Increase 51	Increase 9.25			51	9.25	191	36.46

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.6	Aqueous Wastes with Heavy Metals	LA-W913-0	83	1.50					83	1.50		
		LA-W913-4	25	0.40					25	0.40		
		LA-W913-5	11	0.15					11	0.15		
		LA-W913-6	0	0.00	Increase 20	Increase 1.02			20	1.02	139	3.07
3.1.6	Corrosive Solutions	LA-W914-0	60	0.69					60	0.69		
		LA-W914-4	90	0.36					90	0.36		
		LA-W914-5	39	0.12					39	0.12		
		LA-W914-6	0	0.00	Increase 8	Increase 0.04			8	0.04	197	1.21
3.1.6	Aqueous Cyanides, Nitrates, Chromates, and Arsenates	LA-W915-0	9	0.13					9	0.13		
		LA-W915-4	3	0.002					3	0.002		
		LA-W915-5	11	0.04					11	0.04	23	0.17
3.1.7	Water-Reactive Wastes	LA-W916-0	78	6.03					78	6.03		
		LA-W916-4	26	0.31					26	0.31		
		LA-W916-5	4	0.03					4	0.03		
		LA-W916-6	0	0.00	Increase 5	Increase 0.68			5	0.68	113	7.05
3.1.8	Compressed Gases Requiring Scrubbing	LA-W917-0	13	0.35					13	0.35	13	0.35

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.9	Compressed Gases Requiring Oxidation	LA-W918-0	6	0.08					6	0.08		
		LA-W918-4	168	1.23					168	1.23		
		LA-W918-5	2	0.01					2	0.01		
		LA-W918-6	0	0.00	Increase 1	Increase 0.0002			1	0.0002	177	1.32
3.1.10	Elemental Mercury	LA-W920-0	45	0.50					45	0.50		
		LA-W920-4	20	0.02					20	0.02		
		LA-W920-5	9	0.02					9	0.02		
		LA-W920-6	0	0.00	Increase 5	Increase 0.12			5	0.12	79	0.66
3.2.1	Halogenated Organic Liquids	LA-W907-0	384	16.58	Decrease 3	Decrease 0.0076			381	16.57		
		LA-W907-4	97	1.05					97	1.05		
		LA-W907-5	31	0.49					31	0.49		
		LA-W907-6	0	0.00	Increase 16	Increase 0.15			16	0.15	525	18.26

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Nonhalogen-ated Organic Liquids	LA-W908-0	275	14.34	Increase 0[g] Decrease 4 Decrease 0[h]	Increase 0.076 Decrease 0.49 Decrease 0.11			271	13.82		
		LA-W908-4	409	3.38					409	3.38		
		LA-W908-5	130	2.91					130	2.91		
		LA-W908-6	0	0.00	Increase 33	Increase 0.09			33	0.09	843	20.20
3.2.1	Bulk Oils	LA-W909-0	28	3.75	Increase 0[i] Decrease 23	Increase 0.47 Decrease 2.22			5	2.00		
		LA-W909-4	8	1.48					8	1.48		
		LA-W909-5	28	2.28					28	2.28		
		LA-W909-6	0	0.00	Increase 4	Increase 0.05			4	0.05	45	5.81
3.2.1	PCB Wastes with RCRA Components	LA-W910-0	4	0.74	Increase 6	Increase 0.62[b]			10	1.36		
		LA-W910-6	0	0.00	Increase 30	Increase 1.39			30	1.39	40	2.75

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Liquid and Solid Oxidizers	LA-W923-0	6	0.117					6	0.117		
		LA-W923-4	67	0.145					67	0.145		
		LA-W923-5	13	0.317					13	0.317		
		LA-W923-6	0	0.00	Increase 7	Increase 0.795			7	0.795	93	1.37
3.3	Lead Waste - TBD	LA-W924-0	129	40.16					129	40.16	129	40.16
3.3	Mercury Wastes - TBD	LA-W925-0	63	18.30					63	18.30		
		LA-W925-4	37	0.42					37	0.42		
		LA-W925-5	14	1.52					14	1.52		
		LA-W925-6	0	0.00	Increase 23	Increase 0.67			23	0.67	137	20.91
3.3	Compressed Gases - TBD	LA-W926-0	10	1.25					10	1.25	10	1.25
3.3	Biochemical Laboratory Wastes	LA-W927-0	9	1.34					9	1.34	9	1.34
3.3	Dewatered Treatment Sludge	LA-W928-0	61	12.71					61	12.71	61	12.71
3.3	Explosives	LA-W932-0	0	0.00					0	0.00		
		LA-W932-4	1	0.000001					1	0.000001	1	0.000001

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Lab Packs	LA-W933-0	0	0.00					0	0.00		
		LA-W933-4	114	0.17					114	0.17		
		LA-W933-5	28	0.13					28	0.13		
		LA-W933-6	0	0.00	Increase 6	Increase 0.003	Increase 1	Increase 0.00002[j]	7	0.003	149	0.30
3.4.1	Lead for Surface Decontamin-ation	LA-W930-0	36	33.43	Decrease 1 Decrease 4 Decrease 6 Decrease 2	Decrease 0.11[k] Decrease 0.35[k] Decrease 1.04 Decrease 5.66			23	26.27		
		LA-W930-5	115	23.75	Decrease 1 Decrease 3	Decrease 0.21[k] Decrease 0.62[k]			111	22.92		
		LA-W930-6	0	0.00	Increase 14	Increase 12.06			14	12.06	148	61.25

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.4.2	Nonradioactive or Suspect Waste Items to be Surveyed	LA-W929-0	2	0.0076	Decrease 2	Decrease 0.0076			0	0.00		
		LA-W929-5	1	0.00002			Decrease 1	Decrease 0.00002[j]	0	0.00	0	0.00
None[l]	Lead Requiring Sorting	LA-W931-0	23	4.76	Decrease 23 Increase 0[m]	Decrease 4.78 Increase 0.02			0	0.00		
		LA-W931-5	8	0.44					8	0.44		
		LA-W931-6	0	0.00	Increase 4	Increase 0.64			4	0.64	12	1.08
None[n]	IPA	None	0	0.00	Increase 1 Decrease 1	Increase 0.0005[n] Decrease 0.0005[n]			0	0.00	0	0.00

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Category	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)			Items	Volume (m^3)	Items	Volume (m^3)
3.5	Missing/ nonexistent/ TBV	NONE (Revision 5)	48	8.81					48	8.81	48	8.81

NOTES:

[a] This correction in LA-W904 volume arises from an error in the Appendix B in Revision 4/5 as discussed in Revision 6.0.
[b] This transfer of LA-W904 waste to LA-W910 was approved by NMED on September 18, 1997 as discussed in Revision 6.0
[c] This transfer of LA-W904 waste to LA-W911 was approved by NMED on September 18, 1997 as discussed in Revision 6.0
[d] This correction in LA-W906 volume arises from an error in the Appendix B in Revision 4/5 as discussed in Revision 6.0.
[e] The volume increase arises from the return of unused treatability study sample. It has been returned to the original inventory of LA-W919 (subgroup -0) consistent with the inventory subgroup from which the sample was removed.
[f] These 5 items in subgroups LA-W921-0 and -5 (0.89 m^3 total) were shipped on December 9, 1996 as discussed in DOE's letter dated December 24, 1996.
[g] This increase in LA-W908 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[h] This decrease in LA-W908 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[I] This correction in LA-W909 volume arises from an error in Appendix B in Revision 4/5 as discussed in Revision 6.0.
[j] This transfer of LA-W929 waste to LA-W933 is discussed in Revision 6.0.
[k] The shipment of 0.32 m^3, as reported in the FY97 STP *Annual Update*, consisted of 1 item (0.11 m^3) from subgroup LA-W930-0 and 1 item (0.21 m^3) from subgroup -5. The shipment of 0.97 m^3, as reported in the FY97 STP *Annual Update*, consisted of 4 items (0.35 m^3) from subgroup -0 and 3 items (0.62 m^3) from subgroup -5.
[l] This treatability group (LA-W931, *Lead Requiring Sorting*) is not listed in the CPV; however it is discussed in section 3.4.3 of the *Background Volume*.
[m] This increase in LA-W931 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[n] This item of isopropyl alcohol waste was not included in the original STP inventory and it was shipped for treatment as discussed in DOE's letter dated January 9, 1997.

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.1	IPA Wastes	LA-W901-0	104	15.89							Decrease 96	Decrease 15.87	Decrease 1	Decrease 0.0005[b]	7	0.02		
		LA-W901-5									Increase 0 Decrease 0	Increase 4.11[c] Decrease 4.11			0	0.00	7	0.02
3.1.1	Scintillation Fluids	LA-W902-0	18	2.47					Decrease 15	Decrease 2.24	Decrease 2	Decrease 0.36			1	0.0038		
		LA-W902-5									Increase 0 Decrease 0	Increase 0.13[c] Decrease 0.13			0	0.00	1	0.0038
3.1.2	Lead Blankets	LA-W903-0	4	0.74							Decrease 4	Decrease 0.74			0	0.00	0	0.00
3.1.2	Soil with Heavy Metals	LA-W904-0	59	10.53									Decrease 1	Decrease ~~0.2082~~ 0.1047[d, i] *(see Rev 6.0 for correction)*	58	~~10.33~~ 10.43		
		LA-W904-5									Increase 1	Increase 0.11			1	0.11	59	10.54 ~~10.44~~

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.2	ER Soils	LA-W905-0	36	39.32							Decrease 36	Decrease 39.32			0	0.00	0	0.00
3.1.3	Aqueous Organic Liquids	LA-W906-0	45	1.65											45	1.65		
		LA-W906-4					Increase 27	Increase 0.36							27	0.36		
		LA-W906-5							Increase 3	Increase 0.43	Increase 73	Increase 3.62	Increase 1 Increase 24	Increase 0.0005[b] Increase ~~4.83~~ 4.26[c,i] *(see Rev 6.0 for correction)*	101	~~8.88~~ 8.31	173	10.32 ~~10.89~~
3.1.4	Organic-Contaminated Combustible Solids	LA-W911-0	307	28.32					Decrease 1	Decrease 0.11	Decrease 1	Decrease 0.11			305	28.10		
		LA-W911-4					Increase 33	Increase 0.68							33	0.68		
		LA-W911-5							Increase 2	Increase 0.17	Increase 31	Increase 5.24	Increase 7	Increase 1.46[e]	40	6.87	378	35.65

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.4	Organic-Contaminated Noncombustible Solids	LA-W919-0	80	7.82					Decrease 1	Decrease 0.11					79	7.71		
		LA-W919-4					Increase 9	Increase 0.38							9	0.38		
		LA-W919-5							Increase 9	Increase 0.001	Increase 74	Increase 9.58	Increase 6	Increase 0.95[e]	89	10.53	177	18.62
3.1.5	Combustible Debris	LA-W912-0	83	13.82											83	13.82		
		LA-W912-4					Increase 9	Increase 0.75							9	0.75		
		LA-W912-5									Increase 5	Increase 0.28			5	0.28	97	14.85
3.1.5	Activated or Inseparable Lead	LA-W921-0	74	15.60					Decrease 37	Decrease 7.42	Decrease 23	Decrease 3.41			14	4.77		
		LA-W21-5							Increase 51	Increase 10.11	Decrease 45 Increase 12	Decrease 9.05 Increase 2.29			18	3.35	32	8.12

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.5	Non-combustible Debris	LA-W922-0	41	5.62					~~Decrease 1~~	~~Decrease .0002~~ [h]					41	5.62		
		LA-W922-4					Increase 53	Increase 2.83							53	2.83		
		LA-W922-5							Increase 21	Increase 1.25	Increase 42	Increase 21.04			63	22.29	157	30.74
3.1.6	Aqueous Wastes with Heavy Metals	LA-W913-0	203	1.85							Decrease 12 Decrease 108	Decrease 0.030 Decrease 0.32			83	1.50		
		LA-W913-4					Increase 25	Increase 0.40							25	0.40		
		LA-W913-5									Increase 11	Increase 0.15			11	0.15	119	2.05
3.1.6	Corrosive Solutions	LA-W914-0	162	1.36							Decrease 102	Decrease 0.67			60	0.69		
		LA-W914-4					Increase 90	Increase 0.36							90	0.36		
		LA-W914-5							Increase 13	Increase 0.04	Increase 26	Increase 0.08			39	0.12	189	1.17

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.6	Aqueous Cyanides, Nitrates, Chromates, and Arsenates	LA-W915-0	15	0.13					Decrease 1	Decrease 0.0003	Decrease 1 Decrease 4	Decrease 0.0002 Decrease 0.0031			9	0.13		
		LA-W915-4					Increase 3	Increase 0.002							3	0.002		
		LA-W915-5							Increase 4	Increase 0.02	Increase 7	Increase 0.02			11	0.04	23	0.17
3.1.7	Water-Reactive Wastes	LA-W916-0	78	6.03											78	6.03		
		LA-W916-4					Increase 26	Increase 0.31							26	0.31		
		LA-W916-5							Increase 1	Increase 0.02	Increase 3	Increase 0.01			4	0.03	108	6.37
3.1.8	Compressed Gases Requiring Scrubbing	LA-W917-0	13	0.35											13	0.35	13	0.35
3.1.9	Compressed Gases Requiring Oxidation	LA-W918-0	6	0.08											6	0.08		
		LA-W918-4					Increase 168	Increase 1.23							168	1.23		
		LA-W918-5									Increase 2	Increase 0.01			2	0.01	176	1.32

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.10	Elemental Mercury	LA-W920-0	45	0.50											45	0.50		
		LA-W920-4					Increase 20	Increase 0.02							20	0.02		
		LA-W920-5									Increase 9	Increase 0.02			9	0.02	74	0.54
3.2.1	Halogenated Organic Liquids	LA-W907-0	385	16.58							Decrease 1	Decrease 0.0025			384	16.58		
		LA-W907-4					Increase 97	Increase 1.05							97	1.05		
		LA-W907-5							Increase 13	Increase 0.04	Increase 18	Increase 0.45			31	0.49	512	18.12
3.2.1	Nonhalogenated Organic Liquids	LA-W908-0	275	14.34											275	14.34		
		LA-W908-4					Increase 409	Increase 3.38							409	3.38		
		LA-W908-5							Increase 53	Increase 0.08	Increase 77	Increase 2.83			130	2.91	814	20.63

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Bulk Oils	LA-W909-0	28	3.75											28	3.75		
		LA-W909-4					Increase 8	Increase 1.48							8	1.48		
		LA-W909-5									Increase 28	Increase 2.28			28	2.28	64	7.51
3.2.1	PCB Wastes with RCRA Components	LA-W910-0	4	0.74											4	0.74	4	0.74
3.2.1	Liquid and Solid Oxidizers	LA-W923-0	55	0.20							Decrease 49	Decrease 0.0834			6	0.117		
		LA-W923-4					Increase 67	Increase 0.145							67	0.145		
		LA-W923-5							Increase 24	Increase 0.32	Decrease 11	De - crease 0.0034			13	0.317	86	0.58
3.3	Lead Waste - TBD	LA-W924-0	186	51.44					Decrease 57	Decrease 11.28					129	40.16	129	40.16
3.3	Mercury Wastes - TBD	LA-W925-0	63	18.30											63	18.30		
		LA-W925-4					Increase 37	Increase 0.42							37	0.42		
		LA-W925-5									Increase 14	Increase 1.52			14	1.52	114	20.24
3.3	Compressed Gases - TBD	LA-W926-0	10	1.25											10	1.25	10	1.25

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Biochemical Laboratory Wastes	LA-W927-0	9	1.34											9	1.34	9	1.34
3.3	Dewatered Treatment Sludge	LA-W928-0	1288	268.17	Decrease 1227	Decrease 255.46									61	12.71	61	12.71
3.4.1	Lead for Surface Decontamination	LA-W930-0	125	56.20					Decrease 83	Decrease 14.43[f]			Decrease 6	Decrease 8.34[d]	36	33.43		
		LA-W930-5							Increase 109	Increase 22.50	Increase 6	Increase 1.25			115	23.75	151	57.18
3.4.2	Nonradioactive or Suspect Waste Items to be Surveyed	LA-W929-0	1250	14.24			Decrease 1196 Decrease 41	Decrease 13.97 Decrease 0.26[d]	~~Decrease 4~~	~~Decrease 0.002~~[h]	Decrease 2 Decrease 9	De - crease 0.00094 Decrease 0.0029			2	0.0076[g]		
		LA-W929-5							Increase 1	Increase .00002					1	0.00002	3	0.0076[g]
None	Lead Requiring Sorting	LA-W931-0	48	9.97					Decrease 22	Decrease 4.58	Decrease 3	Decrease 0.63			23	4.76		
		LA-W931-5							Increase 28	Increase 5.73	Decrease 28 Increase 8	Decrease 5.73 Increase 0.44			8	0.44	31	5.20

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Explosives	LA-W932-0	0	0.00											0	0.00		
		LA-W932-4					Increase 1	Increase 0.000001							1	0.000001	1	0.000001
3.3	Lab Packs	LA-W933-0	0	0.00											0	0.00		
		LA-W933-4					Increase 114	Increase 0.17							114	0.17		
		LA-W933-5									Increase 28	Increase 0.13			28	0.13	142	0.30

CPV Section	Category	MWIR ID (by substream)	October, 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.5	Missing/ non-existent/ TBV	NONE											Increase 1 Increase 41 Increase 6	Increase 0.2082[d] Increase 0.26[d] Increase 8.34[d]			48	8.81

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

NOTES:

[a] Changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY96; however, only those reported as Rev. 5.0 "*Other Changes*" are included in this table. All others will be reported in the March, 1998 FY97 *Annual Update* and associated revision request. Therefore, the *"Net Covered Waste Inventory"* may not fully reflect the ACTUAL CPV covered waste inventory as of the date of this revision, in some instances.

[b] As reported in DOE's January 31, 1997 letter, the volume associated with the 104th LA-W901-0 item (0.0005 m^3) was repackaged, and bulked with other LA-W906 wastes in 1991, prior to issuance of the original STP. Since this "*missing*" item has now been located, its volume is being formally transferred to LA-W906 and will be managed as such.

[c] The 4.11 m^3 volume shown for LA-W901, and the 0.13m^3 volume shown for LA-W902 are corrections, to reflect the actual volumes shipped in FY96. As reported in the March, 1997 FY96 *Annual Update*, the volume changes for LA-W901 and LA-W902 in FY96 were based on current data in LANL's waste database. They are consistent with the original documentation submitted by the waste generator, and they are representative of actual volumes of these wastes when shipped for treatment. The volumes used during the preparation of the original STP were erroneous, thereby resulting in more waste being shipped than reported in the original STP inventory. This volume inconsistency was discussed in DOE's January 31, 1997 letter.

[d] These items from LA-W904, LA-W929, and LA-W930 have been determined to be missing or nonexistent. They are being transferred to the category *"Missing/Nonexistent/TBV"* until their presence or absence are fully and finally verified.

[e] Although a number of changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY96, only those reported here as Rev. 5.0 "*Other Changes*" are included in this table. These represent additional waste items that became covered waste after the end of FY96, for which opportunities exist for treatment during FY98. All other covered waste inventory changes since the end of FY96 will be reported in the March, 1998 FY97 *Annual Update.*

[f] This represents a correction to the March, 1996 FY95 *Annual Update* for LA-W930, which had reported that 84 items (14.64 m^3) had been 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.

[g] Two items in the original STP inventory for LA-W929, *Sort, Survey, and Decontamination*, were shipped to DSSI for treatment on December 18, 1996. This change in the covered waste volume will be reflected in the March,1998 FY97 *Annual Update,* and will be deleted from the CPV inventory in the associated revision. Therefore, these two items were reported as treated in the various submittals associated with Revision 4 of the STP, but were reported in the March, 1997 FY96 *Annual Update* (and are shown here) as having been in inventory as of September 30, 1996.

[h] This represents a correction to the March, 1996 FY95 *Annual Update*. It was reported that one LA-W922 item (0.0002 m^3) and 4 LA-W929 items (0.002 m^3) had been removed from inventory. This was incorrect because these items had been repacked into different containers, and are still in inventory.

[i] For LA-W906, Rev. 5.0 (Other Changes), the correct volume associated with this increase is 4.26 m^3 for LA-W904, Rev. 5.0 (Other Changes), the correct decrease is 0.105 m^3. Both of these corrrections are discussed and implemented in Rev 6.0.

ENCLOSURE E

CLEAN COPY VERSION

PROPOSED REVISION 6.0
COMPLIANCE PLAN VOLUME
TEXT

1.0 PURPOSE AND SCOPE OF THE COMPLIANCE PLAN VOLUME

1.1 Introduction

On October 6, 1992, Congress passed the Federal Facility Compliance Act (FFC Act) to address compliance by the United States Department of Energy (DOE) with the land disposal restrictions (LDR) for the storage of mixed waste set forth in Section 3004(j) of RCRA. The FFC Act requires the DOE to submit a Site Treatment Plan (STP) for developing treatment capacities and technologies to treat all of the facility's mixed waste, regardless of the time generated, to the standards promulgated pursuant to Section 3004(m) of RCRA. The FFC Act provides that the appropriate regulatory authority, the New Mexico Environment Department (NMED), may approve, approve with modifications or disapprove the STP. Prior to making such a determination, NMED is required by FFC Act to provide public notice, consider public comments, consult with the Environmental Protection Agency (EPA) and any other state in which a facility affected by the STP is located.

On March 31, 1995, DOE submitted its proposed STP to NMED for the treatment of mixed waste at the Los Alamos National Laboratory (LANL). On April 17, 1995, the public was given notice of and an opportunity to comment to NMED on the draft STP submitted by DOE. After considering public comment and otherwise complying with the FFC Act, NMED determined to approve the draft STP with modifications as provided in this document.

The STP is intended to fulfill the requirements of the FFC Act and establish an enforceable framework to allow DOE and the Regents of the University of California (Respondents) to achieve full compliance with LDR requirements under the New Mexico Hazardous Waste Act (HWA) and RCRA. The compliance dates set forth herein are enforceable time periods in which Respondents are required to develop treatment capacities and technologies, and treat or otherwise meet the requirements set forth for LDR under the HWA and RCRA. The STP will be fully implemented by a Compliance Order issued by NMED on or before October 6, 1995.

1.2 Contents

The STP contains two volumes and is intended to bring Respondents into compliance with LDR storage prohibitions under the HWA and RCRA. The Compliance Plan Volume of the STP provides overall schedules, including compliance dates, for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The Compliance Plan includes a schedule for the submittal of applications for permits, construction of treatment facilities, technology development, off-site transportation for treatment, and the treatment of mixed wastes

in full compliance with the HWA and the implementing regulations at 20 NMAC 4.1, which incorporates by reference 40 CFR Parts 260 through 270. The Background Volume of the STP contains progress reports as required in the Compliance Order. Respondents shall carry out the activities described in the STP, including the Compliance Plan Volume of the STP, in accordance with the schedules and requirements set forth in the STP and the Order.

1.3 STP Revisions and Amendments

The STP Compliance Plan Volume (CPV) has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order (FFCO), as amended and revised. Appendix A to the CPV provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

2.0 Compliance Schedules

The STP provides overall schedules for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The schedules include those activities required to bring existing waste treatment technologies into operation, process backlogged and currently generated waste, include schedules required to develop new facilities and capacity for treatment and establish an overall time frame for achieving compliance with the LDR requirements under the HWA and 20 NMAC 4.1.

2.1 Categories of Activities for Compliance Dates

The categories of activities for which compliance dates will be provided for different types of treatment approaches in the STP are listed in the tables below. The categories of activities are based on Section 3021(b)(1)(B)(I), (ii), and (iii) of the RCRA, to the extent appropriate.

2.1.1 Plans Where Treatment Technology Exists

For most of the mixed waste, treatment technologies have been identified and developed. For the waste that will be treated on-site, the categories of activities for compliance dates identified in Table I shall apply. Compliance dates for the activities identified in Table I may be found in Section 3.1.

Table I. Categories of Activities for Compliance for Mixed Waste with Existing Treatment Technologies.

A.	Submit permit applications to the NMED.
B.	Initiate construction as specified in the NMED permit.
C.	Complete system testing and commence operation.
D.	Begin treating mixed waste.
E.	Complete treatment of existing wastes to applicable regulatory standards.

2.1.2 Plans Where Technology Must Be Developed

For some mixed waste, no treatment technologies have been identified and developed, or the treatment technology must be modified or adapted to apply to such waste. For the waste that will be treated on-site, the categories of activities for compliance dates are identified in Table II and shall apply. Compliance dates for the activities identified in Table II may be found in Section 3.2.

Table II. Categories of Activities for Compliance Dates for Mixed Waste Without Existing Treatment Technologies.

A. Identify and develop technology.
B. Submit permit application to NMED; or
C. Submit a Notification of Intent to perform treatability study to NMED a minimum of 45 days prior to commencement of the study.
D. Initiate construction as specified in the NMED.
E. Commence systems testing.
F. Begin treating mixed waste.
G. Complete treatment of existing wastes to applicable regulatory standards.

2.1.3 Requirements Pertaining to Radionuclide Separation

The FFC Act sets additional requirements in cases in which DOE intends to conduct radionuclide separation of mixed waste. Should the DOE determine to do radionuclide separation of such mixed waste, DOE will schedule specific compliance dates based on category activities identified in Table III. "Radionuclide separation" shall mean segregating the radioactive portion of the mixed waste from the hazardous portion of the mixed waste.

Table III. Categories of Activities for Compliance Dates for Radionuclide Separation of Mixed Waste

A.	Complete an estimate of the volume of waste generated by each case of radionuclide separation.
B.	Complete an estimate of the volume of waste that would exist or be generated without radionuclide separation.
C.	Complete an estimate of the costs of waste treatment and disposal if radionuclide separation is used compared with the estimated costs if it is not used.
D.	Provide the assumptions underlying such estimates of waste volumes and cost estimates.
E.	Provide characterization methodologies for determining waste type.
F.	Submit a plan for treating or managing hazardous waste residues, accompanied by a NMED permit application.

2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment

In lieu of plans to treat mixed-waste on-site, DOE may treat waste at an off-site facility (at a commercial or non-commercial mixed waste treatment facility), or DOE may recycle waste at an off-site facility. Should DOE elect to use off-site recycling facilities in lieu of (or in combination with) treatment, it will follow the requirements prescribed in this Section in the same manner as if

the waste was being shipped off-site for treatment. Any and all requirements imposed by the off-site treatment/recycling facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment/recycling site shall be met by Respondents.

DOE shall notify the NMED Project Manager in writing as soon as possible if mixed waste is planned to be sent to a non-commercial facility. Notification should be made if possible when DOE is first considering such an option to allow NMED and the state to address any state issues or concerns with other states. The NMED Project Manager shall approve in writing the proposed off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility. Activities for mixed waste to be shipped off-site for treatment/recycling at a non-commercial facility are identified in Table V.

Should DOE decide to treat or recycle waste at a commercial off-site facility, DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility.

Table IV. Activities for Mixed Waste to be Shipped Off-Site for Treatment or Recycling at a Commercial facility

A.	Meet all regulatory requirements for off-site shipment.
B.	Provide documentation to NMED that waste has been received at an off-site facility for treatment or recycling within 45 working days of receipt of waste at the treatment facility.

2.1.4.1 Specific Site Requirements for Non-commercial Treatment Facilities

Shipment to Idaho National Engineering Laboratory

Prior to shipment, Idaho National Engineering Laboratory and Idaho Division of Environmental Quality shall be notified of any pending shipments of waste prior to shipment should DOE ship mixed low-level waste to INEL. Proper procedures including additional approvals (if necessary) and documentation shall be completed prior to the shipment of wastes to INEL. Management of post-treatment waste residuals or newly generated waste streams will be in accordance with the requirements of DOE, the State of Idaho and that state where they will be disposed. A modification to LANL's RCRA permit providing for the return of such wastes and/or residues to LANL must be approved by NMED prior to any such return of wastes and/or residuals to LANL. DOE will notify the NMED Project Manager in writing as soon as possible, and in any

event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams from INEL.

Shipments of low-level mixed wastes to planned facilities (not yet existing) will occur only after that treatment and schedules are approved by DOE-ID and the State of Idaho. Upon approval of the planned treatment facilities, the applicable protocol from the paragraph above will be implemented for mixed wastes to be treated at planned facilities.

Shipment to Oak Ridge Reservation

In the case that Oak Ridge Reservation (ORR) may not dispose of mixed-waste residues or new waste streams generated from off-site treatment, and they cannot be sent to another facility for disposal, then the residues may return to LANL. Should residual or newly generated waste streams be returned to LANL, the proper permits for the State of New Mexico must exist. DOE will notify the NMED Project Manager in writing as soon as possible, and in any event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams from ORR.

Table V. Activities for Mixed Waste to be Shipped Off-Site for Treatment or Recycling at a Non-commercial facility

A.	Request necessary approval from NMED for shipment of waste by category before shipping.
B.	Meet all regulatory requirements for off-site shipment.
C.	Provide documentation to NMED of confirmation of shipment date within 14 working days prior to sending waste to an off-site facility for treatment, disposal, or recycling, or storage pending treatment, disposal, or recycling.
D.	Provide documentation to NMED that waste has been received at an off-site facility for treatment within 45 working days of receipt of waste at the off-site facility.
E.	Meet all regulatory requirements to include RCRA Permit modifications for residual or newly generated waste streams after treatment or recycling.
F.	Provide documentation to NMED within 30 working days after receipt of residual or newly generated waste streams upon return to LANL.

2.1.5 Plans Related to Other Mixed Waste Activities

1. Activities other than the types of activities specifically called for in the FFC Act as requiring schedules are described in this STP. Some of these activities may be associated

with schedules which may contain compliance dates related to treatment of the DOE's mixed waste.

2. For mixed waste which is not sufficiently characterized to allow identification of appropriate treatment, notification of the characterization of such waste shall be in accordance with the annual update process described in the Compliance Order. If such characterization results in the addition or deletion of a treatability group or an increase in volume in a treatability group, a revision would be required pursuant to Section X of the Compliance Order.

3.0 LOW-LEVEL MIXED WASTE STREAMS

This Chapter presents proposed schedules for treatment technologies and the preferred options to treat low-level mixed waste streams (MLW or LLMW) at LANL. All preferred options not described below must be approved by NMED in accordance with the revision process pursuant to the Compliance Order.

The original October 4, 1995 STP inventory in each MLLW treatability group has been modified through the revision process in the FFCO. The table in CPV Appendix B provides a comprehensive summary of changes to the CPV covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of this revision. In Appendix B, the original STP inventory in each MLLW treatability group is denoted as subgroup 0 of that treatability group (e.g., the original volume of STP treatability group LA-W906 became LA-W906-0). Each revision that has since added volumes to individual treatability groups has resulted in creation of an additional subgroup, having the same number as the revision (e.g., LA-W906-4 was created in Revision 4.0, and LA-W906-5 was created in Revision 5.0).

In most Sections of this chapter, the subgroups of the treatability groups are not shown. In those cases, the Activities and Compliance Dates are applicable to the entire net volume of that treatability group. However, when subgroups of a treatability group have been assigned Activities and Compliance Dates unique to that subgroup, those subgroups are detailed in the text. For a complete listing of volumes by subgroup for all treatability groups, please refer to Appendix B.

3.1 Mixed Waste Streams for Which Technology Exists

The following subsections summarize LLMW treatability groups for which technology exists.

3.1.1 Off-site Treatment by Thermal Treatment

Treatability Group(s):

LLMW for Thermal Treatment (MWIR Treatment ID DS-S001)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
IPA wastes	LA-W901	D001, D009, F002, F003, F005	0	0.00
scintillation fluids	LA-W902	D001, F003, F005	0	0.00
Totals			**0**	**0.00**

Treatment Technology:

The waste will be treated at an off-site facility that combusts organic liquid waste. Should DOE decide to treat waste at an off-site non-commercial facility, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	9/30/96
B. Complete shipping waste	12/30/96
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.2 Off-site Treatment by Stabilization or Macroencapsulation

Treatability Group(s):

LLMW for Stabilization

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (M^3)
lead blankets	LA-W903	D007, D008	0	0.00
soil with heavy metals	LA-W904	D004, D005, D006, D007, D008, D009, D010, D011	3	0.45
ER soils	LA-W905	D028, D029, F001, F005 D010, D011	0	0.00
Totals			3	0.45

Treatment Technology:

The waste will be treated at an off-site facility that stabilizes or macroencapsulates wastes. Should DOE decide to treat waste at an off-site non-commercial facility, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	05/30/97
B. Complete shipping waste	12/30/98
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.3 Evaporative Oxidation (MWIR Treatment ID GJ-S801C)

Treatability Group(s):

LLMW for Evaporative Oxidation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906-0 LA-W906-4 LA-W906-5	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D030, D032, D033, D034, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	173	10.32
Totals			**173**	**10.32**

Note: See below for additional wastes in this treatability group

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site treatment facility (commercial or non-

commercial) and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	12/30/96
B. Initiate construction	As specified in the NMED permit.
C. Complete system test and commence operation and begin treating mixed waste	6/19/99
D. Complete treatment of existing wastes to applicable regulatory standards, or	2/09/00
E. Complete shipment of existing wastes for treatment to an off- site facility.	2/09/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes

The following additional wastes will require management in this category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906-6	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D030, D032, D033, D034, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	88	5.74
Totals			**88**	**5.74**

Activities for wastes belonging to this treatability subgroup.

Activity	Compliance Dates
G. Complete shipment of existing wastes for treatment to an off- site facility.	2/09/03
H. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.4 Thermal Desorption (MWIR Treatment ID GJ-S801B)

LLMW for Thermal Desorption/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
organic-contaminated combustible solids	LA-W911	D001, D004, D008, D009, F001, F002, F003, F005	381	36.07
Totals			**381**	**36.07**

LLMW for Thermal Desorption

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
organic-contaminated noncombustible solids	LA-W919	D001, D003, D004, D005, D006, D007, D008, D009, D010, D011, D012, D015, D018, D019, D020, D022, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D042, D043, F001, F002, F003, F004, F005	227	27.31
Totals			**227**	**27.31**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	11/16/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	02/01/01
D. Complete treatment of existing wastes to applicable regulatory standards, or	02/14/02
E. Complete shipping of existing wastes to an off-site treatment facility.	02/14/02
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.5 Macroencapsulation (MWIR Treatment ID PX-S803)

Treatability Group(s):

LLMW for Macroencapsulation/Off-site treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
combustible debris	LA-W912	D001, D002, D003, D005, D006, D007, D008, D009, D011, D035, F001, F002, F003, F005	103	15.17
Totals			**103**	**15.17**

LLMW for Macroencapsulation

Treatability group		RCRA codes	Number of items	Net volume (m^3)
activated or inseparable lead	LA-W921	D008	34	7.09
noncombustible debris	LA-W922	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011	191	36.46
Totals			**225**	**43.55**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/04/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operation and begin treating mixed waste	02/01/00
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/25/00
E. Complete shipping of existing wastes to an off-site treatment facility.	08/25/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.6 Chemical Plating Waste Treatment Skid (MWIR Treatment ID LA-S004)

Treatability Group(s):

LLMW for Chemical Plating Waste Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous wastes with heavy metals	LA-W913	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011	139	3.07
corrosive solutions	LA-W914	D001, D002	197	1.21
aqueous cyanides, nitrates, chromates, and arsenates	LA-W915	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, F007, P029, P098	23	0.17
Totals			**359**	**4.45**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any

event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Resubmit revised permit application to NMED	10/30/96
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	03/17/00
D. Complete treatment of existing wastes to applicable regulatory standards, or	05/08/01
E. Complete shipping of existing wastes to an off-site treatment facility.	05/08/01
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.7 Water-reactive Metals Treatment Skid (MWIR Treatment ID LA-S003)

Treatability Group(s):

LLMW for Water-Reactive Metals Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
water-reactive wastes	LA-W916	D001, D003, D004, D005, D007, D008, D010, D011	113	7.05
Totals			**113**	**7.05**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	06/30/01
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	09/09/03
D. Complete treatment of existing wastes to applicable regulatory standards, or	04/21/04
E. Complete shipping of existing wastes to an off-site treatment facility.	04/21/04
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.8 Gas-scrubbing Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas-Scrubbing Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
compressed gases requiring scrubbing	LA-W917	D001, D002, P056	13	0.35
Totals			**13**	**0.35**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/28/03
E. Complete shipping of existing wastes to an off- site treatment facility.	08/28/03
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.9 Gas Oxidation Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas Oxidation Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
compressed gases requiring oxidation	LA-W918	D001, U226	177	1.32
Totals			**177**	**1.32**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/28/03
E. Complete shipping of existing wastes to an off-site treatment facility.	08/28/03
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.10 Mercury Amalgamation (MWIR Treatment ID PI-S801)

Treatability Group(s):

LLMW for Amalgamation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
elemental mercury	LA-W920	D006, D009, F005	79	0.66
Totals			**79**	**0.66**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/30/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	06/05/00
D. Complete treatment of existing waste to applicable regulatory standards, or	11/15/00
E. Complete shipping of existing wastes to an off-site treatment facility.	11/15/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.2 Mixed Waste Streams for Which Technology Requires Adaptation or for Which No Technology Exists

The following subsections summarize mixed waste streams for which technology requires adaptation or for which no technology exists.

3.2.1 Hydrothermal Processing

Treatability Group(s):

LLMW for Hydrothermal Processing/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
halogenated organic liquids	LA-W907	D001, D002, D003, D007, D009, D010, D011, D018, D019, D022, D028, D029, D035, D043, F001, F002, F003, F004, F005, U077, U080, U226, U227, U228, U236	525	18.26
nonhalogenated organic liquids	LA-W908	D001, D002, D003, D004, D007, D008, D009, D011, D018, D038, D040, F002, F003, F004, F005, U002, U019, U154, U169, U188, U220, U246	843	20.20
bulk oils	LA-W909	D002, D004, D005, D006, D007, D008, D009, D010, D011, D021, D027, D039, F001, F002, F003, F005	45	5.81
PCB wastes with RCRA components	LA-W910	D004, D005, D006, D007, D008, D009, D010, D011, D012, D015, D019, D027, D028, D030, D031, D032, D033, D034, D036, D039, D042, D043, F002, F003, F004, F005	40	2.75
Totals			**1453**	**47.02**

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
Liquid and solid oxidizers	LA-W923	D001, D003, D005	93	1.37
Totals			**93**	**1.37**

Treatment Technology:

The preferred destruction treatment technology option for this treatability group is Hydrothermal Processing which is a technology that needs development for adaptation to treat radioactive and PCB-bearing waste. This treatment technology is being adapted at LANL and is expected to be developed into a mobile treatment unit. The GJPO schedule for deployment of the unit indicates its possible availability to LANL after February 2002. Shipment off-site for treatment is a parallel preferred option. Respondents shall submit treatment or off-site shipment schedules and

options for NMED's approval by November 30, 1998. Treatment or other options other than off-site shipment shall be carried out pursuant to the revision process. Off-site shipments must be completed by February 2002.

Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

3.3 Mixed Waste Requiring Further Characterization or for Which Technology Assessment Has Not Been Done (MWIR Treatment ID LA-S701)

Treatability Group(s):

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
lead wastes - TBD	LA-W924	D003, D008	129	40.16
mercury wastes - TBD	LA-W925-0	D007, D008, D009, F001	63	18.30
compressed gases - TBD	LA-W926	D001, D007, D009, D022, P056, U080, U226	10	1.25
biochemical laboratory wastes	LA-W927	D001, D003	9	1.34
dewatered treatment sludge	LA-W928	see Subsection 3.3 in the Background Volume	61	12.71
Totals			**272**	**73.76**

Note: See below for additional wastes in some of these treatability groups

Treatment Technology:

The following steps will be taken to properly characterize this waste:

- Conduct additional generator interviews
- Prepare a sampling plan for waste not adequately characterized

- Conduct sampling and analysis
- Determine treatment options

Activities for wastes originally belonging to these treatability groups as listed above.

Activity	Compliance Dates
A. Complete generator interviews	10/30/95
B. Complete sampling and analysis plan	1/30/96
C. Complete sampling and analysis	9/30/98
D. Complete determination of treatment options	12/20/98
E. Complete shipping of existing wastes to an off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups.	12/20/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes and treatability groups:

The following additional wastes will require management in this category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	RCRA Codes	Number of items	Net volume (m3)
mercury wastes-TBD	LA-W925-4 LA-W925-5 LA-W925-6	D003, D007, D008, D009, F001, F002, F005	74	2.61
~~mercury wastes-TBD~~	~~LA-W925-5~~	~~D007, D008, D009, F001~~	~~14~~	~~1.52~~
explosives	LA-W932	D003	1	0.000001
labpacks	LA-W933	D001, D002, D003, D004, D005, D006, D007, D008, D010, F003, F005, D011, P012, P029, P098, P106, P113, P120, U131, U144, U145, U188, U190, U204, U216, U219	149	0.30
Totals			**224**	**2.91**

Activities for wastes belonging to these treatability groups and subgroups.

Activity	Compliance Dates
G. Complete sampling and analysis plan	1/30/99
H. Complete sampling and analysis	9/30/01
I. Complete determination of treatment options	12/20/01
J. Complete shipping of wastes to an off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups	12/20/03
K. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at off-site facility

3.4 Plans for Other Types of Activities

The following subsection summarizes plans for other types of activities.

3.4.1 Lead Decontamination (MWIR Treatment ID LA-S001)/Off-site Treatment (preferred option)

Treatability Group(s):

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net volume (m^3)	No. Items	Net volume (m^3)	No. Items	Net volume (m^3)
lead for surface contamination	LA-W930-0 LA-W930-5	0	0.00	134	49.19	134	49.19
Totals		**0**	**0.00**	**134**	**49.19**	**134**	**49.19**

Note: See below for additional wastes in this treatability group

Treatment Technology:

This treatability group contains two categories of lead for decontamination:

- The first category is lead in the original LA-W930-0 inventory that is amenable to decontamination in the on-site lead decontamination trailer, which was designed to decontaminate simple lead shapes, such as lead bricks, of certain physical dimensions. The trailer is on-site and has operated, but needs an upgrade for prolonged operation.

- The lead in the second category is lead in the original LA-W930-0 inventory that is not amenable to decontamination in the on-site lead decontamination trailer, plus subsequent additions to the original inventory shown in Appendix B. This lead will be processed using other on-site decontamination processes, such as dry sandblasting or hand-scrubbing, or sent to off-site lead decontamination services.

Any lead not acceptable for on-site or off-site lead decontamination, plus any lead unsuccessfully decontaminated, will be designated for treatment and disposal at an off-site facility, or for recycle through an off-site capability, such as metal melting to create shielding blocks or a DOE lead

bank. Non-conforming items will be reassigned to appropriate treatability groups in accordance with the FFCO.

Should DOE decide to treat or recycle waste at an off-site non-commercial facility in lieu of plans to treat or recycle such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment/recycle option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment/ recycling facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment/recycling site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility.

Lead shapes and forms in the first category.

Activity	Compliance Date
A. Complete lead decontamination	09/30/97

Lead shapes and forms in the second category.

Activity	Compliance Date
A. Provide schedule for development of lead processing techniques and options	06/30/96
B. Segregate lead waste into decontamination groupings	07/31/97
C. Complete shipment of wastes to decontamination operations, or	12/02/98
D. Determine treatment/disposal or other recycle options for lead waste not acceptable for decontamination	12/02/98
E. Complete treatment/disposal operations or other recycle operations for lead waste not acceptable for decontamination	07/31/99
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes

The following additional wastes will require management in the second category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net volume (m^3)	No. Items	Net volume (m^3)	No. Items	Net volume (m^3)
lead for surface contamination	LA-W930-6	0	0.00	14	12.06	14	12.06
Totals		**0**	**0.00**	**14**	**12.06**	**14**	**12.06**

Activities for wastes belonging to this treatability subgroup.

Activity	Compliance Date
G. Complete shipment of wastes to decontamination operations, or	12/02/99
H. Determine treatment/disposal or other recycle options for lead waste not acceptable for decontamination	12/02/99
I. Complete treatment/disposal operations or other recycle operations for lead waste not acceptable for decontamination	07/31/00
J. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.4.2 Sorting, Surveying, and Decontamination (MWIR Treatment ID GJ-S804)

Treatability Group(s):

Treatability group	MWIR waste ID	Number of items	Net volume (m^3)
1. nonradioactive or suspect waste items to be surveyed	LA-W929-0(1)	0	0.0
2. nonradioactive or suspect waste items to receive RCRA and radiological characterization	LA-W929-0(2)	0	0.00
3. nonradioactive or suspect waste items that cannot or should not be sampled	LA-W929-0(3)	0	0.0
Totals		**0**	**0.00**

Note: See below for additional wastes in this treatability group

Treatment Technology:

The waste items in part 1 of the original volume in this treatability group will be surveyed using a field operation that will survey waste suspect of radioactive contamination to determine whether it is radioactively contaminated. The work will be done on-site with equipment and staffing provided by LANL or another DOE site. Waste determined not to be radioactively contaminated will be treated using commercial facilities permitted to treat hazardous waste; waste determined to be radioactively contaminated will be assigned to applicable treatability groups and/or sent to offsite facilities for appropriate treatment.

Waste items in part 2 of this treatability group will be surveyed using complete RCRA and radiological sampling and characterization. Waste sampled under this alternative will be treated and disposed as low-level mixed waste; the waste will be assigned to applicable treatability groups and/or sent to off-site facilities for appropriate treatment based on the results of this characterization.

Sampling for this characterization alternative will be conducted in accordance with RCRA SW-846 methods. To ensure an adequate volume of waste material is available for sampling and to maximize the cost effectiveness of the sampling activities, some lab packed and other waste items may be bulked into larger volume containers; all RCRA waste codes will be transferred to the bulked wastes to ensure correct RCRA categorization is maintained. It may be found, when preparing a given drum for sampling, (for example, solid small volume waste items that cannot be sampled in accordance with EPA SW-846 methods) are in fact not amenable to sampling and should have been included in the item count for group 3 . If visual inspection so indicates, these waste items will be transferred to Group 3 and assigned to applicable treatability groups based on existing knowledge.

Waste items in part 3 of this treatability group which are confirmed not amenable to sampling (e.g., lead-acid batteries, spray paint cans) will be assigned to applicable treatability groups based on existing knowledge. It may be found, when inspecting a given drum, that some items can in fact be sampled in accordance with EPA SW-846 methods and should have been included in the item count for Group 2. If visual inspection so indicates, these waste items will be transferred to Group 2 and sampled accordingly.

Additional compliance dates will be proposed for any waste items in this treatability group found not to have available treatment/disposal options following a complete review of all survey, analytical, or visual inspection data obtained through these processes.

For all waste items in this treatability group, shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within (45) working days of receipt of waste at the treatment facility.

Activities for waste items in part 1 of this treatability group.

Activity	Compliance Dates
A. Complete field survey	10/30/96
B. Submit documentation declaring waste items as nonradioactive, or submit documentation assigning waste items to applicable treatability groups	2/28/97
C. Propose additional compliance dates if necessary	4/30/97

Activities for waste items in part 2 of this treatability group.

Activity	Compliance Dates
D. Complete RCRA and radiological sampling	1/28/97
E. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	2/28/97
F. Propose additional compliance dates if necessary	4/30/97

Activities for waste items in part 3 of this treatability group.

Activity	Compliance Dates
G. Complete visual verification	1/28/97
H. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	6/30/97
I. Propose additional compliance dates if necessary	9/30/97

Additional wastes:

Treatability group	MWIR waste ID	Number of items	Net volume (m^3)
Nonradioactive or suspect waste items	LA-W929-5	0	0.00
Totals		**0**	**0.00**

Activities for items added as subgroup 5 of this treatability group.

Activity	Compliance Dates
J. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	3/31/98
K. Propose additional Compliance Dates if necessary	3/31/98

3.5 Management of "Missing" Items.

Waste Category:

Category	MWIR waste ID	No. Items	Net volume (m^3)
Missing/nonexistent/TBV	None	48	8.81
Totals		**48**	**8.81**

Treatment Technology:

During visual inspections and sampling activities in support of STP waste work-off, occasionally an item cannot be found, or it is not located in the containers in which it is expected to be, according to the LANL data files for the waste item. In some instances, such items could not be verified as having ever been received in storage at LANL, and further follow-up investigations of the record files revealed that for various reasons, the waste items were never in fact generated, although on paper they were included in the original STP inventory.

In these instances, DOE and UC, and their contractors, perform a thorough inspection of both the physical inventories and the data files. When DOE and UC determine that an STP covered waste item does not exist, transfer of the item to the category called *"Missing/ nonexistent/TBV (*to be verified*)*", is requested through the revision process associated with the next *Annual Update.*

DOE and UC will re-verify the absence of all *"Missing/ nonexistent/TBV"* items container-by-container, as each STP waste item is being sampled, repackaged, or otherwise prepared for on- or off-site treatment. The final verification that all *"Missing/ nonexistent/TBV"* items do not in fact exist will be completed by April 21, 2004, at which time all remaining MLLW items in the original STP inventory will have been treated. At that time, DOE and UC will request deletion of all items having been fully verified as missing or nonexistent.

At any time during the re-verification process, should any of these items be discovered to exist, NMED will be notified, and approval will be requested for assignment of the rediscovered items to the appropriate TG. If necessary, they will be assigned new Activities and Compliance Dates, in accordance with the terms of the FFCO.

The following steps will be taken to verify presence or absence of this waste:

Activity	Compliance Dates
A. Initiate re-verification process on a shipment-by-shipment basis	01/03/98
B. Complete re-verification process	04/21/04
C. Re-assign any existing items to appropriate treatability groups	04/21/04
D. Complete treatment of existing wastes to applicable regulatory standards, or	10/30/04
E. Complete shipping of existing wastes to an off-site treatment facility	10/30/04
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

4.0 MIXED TRANSURANIC WASTE

Treatment Group(s):

Assorted Mixed Transuranic Waste

Treatment Technology

Respondents are required to develop treatment technologies and treat mixed transuranic (MTRU) waste at LANL according to the schedule set forth below:

Activity	Compliance Date
A. Development of treatment technologies	June 30, 1999
B. Submit permit application amendment or modification to NMED for treatment of MTRU	December 31, 1999
C. Begin treating MTRU	Six (6) months after NMED permit issuance
D. Complete treatment of existing MTRU to applicable regulatory standards	December 31, 2010

The above schedule is not based on the assumption that WIPP will be a disposal option or that DOE will receive a variance from treatment standards for land disposal of MTRU waste to be disposed at WIPP. All revisions to compliance dates shall be in accordance with the procedures set forth in the compliance order.

CPV APPENDIX A
HISTORY OF STP REVISIONS AND AMENDMENTS

As discussed in CPV Section 1.3, the STP Compliance Plan Volume has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order, as amended and revised. This Appendix provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

To date, there have been six revisions and two amendments to the CPV. In addition, the FFCO was amended once, on May 20, 1997. The following Table A-1 provides a summary of these changes. More detailed descriptions can be found in the CPV Update portion of each year's STP *Annual Update,* and the original correspondence requesting each change.

Table A-1. SUMMARY OF CHANGES TO THE CPV AND THE FFCO

Action	Document Modified	Effective Date	Effect on FFCO/STP
Rev. 1.0	STP/CPV	6/12/96	Added off-site treatment as a parallel preferred option for most MLLW treatability groups
Rev. 2.0	STP/CPV	12/9/96	Reduced volume of LA-W928 by approving reclassification of sludges as LLW
Amendment 1.0	STP/CPV	10/30/96	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Rev. 3.0	STP/CPV	1/27/97	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Amendment 1.0	FFCO	5/20/97	Modified FFCO Sections IV, V, IX, and X to streamline waste transfers and deletions
Amendment 2.0	STP/CPV	9/4/97	Extended CPV Activity 3.1.2B Compliance Date to 12/29/97
Rev. 4.0	STP/CPV	*12/29/97*	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added treatability groups, and deleted treated items
Rev. 5.0	STP/CPV	*12/29/97*	Added volumes reported in FY95 and FY96 *Annual Updates* (and certain other items) to several treatability groups, added Activities and Compliance Dates, added CPV Appendices, and deleted treated items
Rev. 6.0	STP/CPV	*(to be added)*	Added volumes reported in FY97 *Annual Update* to several treatability groups, added Activities and Compliance Dates, adjusted several original inventory volumes, transferred one LA-W929 item to a new treatability group, and deleted treated items

CPV APPENDIX B
SUMMARY OF CPV INVENTORY CHANGES

The following tables provide a comprehensive summary of changes to the CPV covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of this revision. The volumes given in the tables reflect changes to the individual MLLW treatability group volumes due to increases or decreases, as noted. Table B-1 reports the inventory changes arising from Revision 6.0, while Table B-2 reports the inventory changes previously approved.

Key to Reading the Subgroups

The original STP inventory in each MLLW treatability group is now denoted as subgroup -0 of that treatability group (e.g., the original volume of STP treatability group LA-W906 became LA-W906-0). The original October 4, 1995 STP inventory in each MLLW treatability group has been modified through the revision process in the FFCO. The following revisions have affected volumes in individual treatability groups to date:

Revision	Effect on Volumes
Rev. 2.0	Reduced volume of LA-W928
Rev. 3.0	Divided original volume of LA-W929 into three subgroups
Rev. 4.0	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added new treatability groups
Rev. 5.0	Increased and decreased volumes in several treatability groups
Rev. 6.0	Increased and decreased volumes in several treatability groups, transferred the volume in LA-W929-5 to another treatability group

Each revision that has added volumes to individual treatability groups has resulted in creation of an additional subgroup of that treatability group, having the same number as the revision (e.g., LA-W906-4 was created in Revision 4.0, and LA-W906-5 was created in Revision 5.0).

Additions and Deletions to Date

To date, MLLW inventory increases and decreases have been incorporated into the covered waste inventories through Revisions 2.0, 4.0, 5.0, and 6.0. Revision 2.0 incorporated decreases in treatability group LA-W928 due to deletion of covered waste items. Rev. 4.0 resulted in decreases to LA-W929 and increases in other TGs, primarily by transferring LA-W929 items to other TGs. Rev. 5.0 and 6.0 resulted in both additions to and deletions of covered waste volumes (i.e., increases and decreases) in a number of TGs. Therefore, the Appendix B tables that follow show that subgroups -4, -5, and -6 exist for some treatability groups, but not for all.

These tables provide a master list of MLLW inventory changes presented in the *Annual Updates,* to enable users of the STP to track all changes in the LANL MLLW covered waste inventory that occurred since the original STP inventory was established in the October 4, 1995 FFCO/CPV.

Changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY97. However, only those reported as of Rev. 6.0 are included in this table. All others will be reported in the next *Annual Update* and associated revision request. Therefore, the *"Net Covered Waste Inventory"* may not fully reflect the actual CPV covered waste inventory as of the date of this revision, in some instances.

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.1	IPA Wastes	LA-W901-0	7	0.02	Decrease 7	Decrease 0.02			0	0.00	0	0.00
3.1.1	Scintillation Fluids	LA-W902-0	1	0.0038	Decrease 1	Decrease 0.0038			0	0.00	0	0.00
3.1.2	Lead Blankets	LA-W903-0	0	0.00					0	0.00	0	0.00
3.1.2	Soil with Heavy Metals	LA-W904-0	58	~~10.33~~ 10.43[a]	Decrease 6 Decrease 2 Decrease 46 Decrease 2	Decrease 0.62[b] Decrease 0.42[c] Decrease 8.91 Decrease 0.14			2	0.34		
		LA-W904-5	1	0.11					1	0.11	3	0.45
3.1.2	ER Soils	LA-W905-0	0	0.00					0	0.00	0	0.00

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.3	Aqueous Organic Liquids	LA-W906-0	45	1.65					45	1.65		
		LA-W906-4	27	0.36					27	0.36		
		LA-W906-5	101	~~8.88~~ 8.31[d]					101	8.31		
		LA-W906-6	0	0.00	Increase 88	Increase 5.74			88	5.74	261	16.06
3.1.4	Organic-Contaminated Combustible Solids	LA-W911-0	305	28.10	Increase 2	Increase 0.42[c]			307	28.52		
		LA-W911-4	33	0.68					33	0.68		
		LA-W911-5	40	6.87					40	6.87		
		LA-W911-6	0	0.00	Increase 1	Increase 0.0038			1	0.0038	381	36.07
3.1.4	Organic-Contaminated Noncombus-tible Solids	LA-W919-0	79	7.71	Increase 1	Increase 0.11[e]			80	7.82		
		LA-W919-4	9	0.38					9	0.38		
		LA-W919-5	89	10.53					89	10.53		
		LA-W919-6	0	0.00	Increase 49	Increase 8.58			49	8.58	227	27.31

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.5	Combustible Debris	LA-W912-0	83	13.82					83	13.82		
		LA-W912-4	9	0.75					9	0.75		
		LA-W912-5	5	0.28					5	0.28		
		LA-W912-6	0	0.00	Increase 6	Increase 0.32			6	0.32	103	15.17
3.1.5	Activated or Inseparable Lead	LA-W921-0	14	4.77	Decrease 1 Decrease 2	Decrease 0.06[f] Decrease 1.72			11	2.99		
		LA-W921-5	18	3.35	Decrease 4	Decrease 0.83[f]			14	2.52		
		LA-W921-6	0	0.00	Increase 9	Increase 1.58			9	1.58	34	7.09
3.15	Non-combustible Debris	LA-W922-0	41	5.62	Decrease 14	Decrease 2.915			27	2.71		
		LA-W922-4	53	2.83					53	2.83		
		LA-W922-5	63	22.29	Decrease 3	Decrease 0.62			60	21.67		
		LA-W922-6	0	0.00	Increase 51	Increase 9.25			51	9.25	191	36.46

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.6	Aqueous Wastes with Heavy Metals	LA-W913-0	83	1.50					83	1.50		
		LA-W913-4	25	0.40					25	0.40		
		LA-W913-5	11	0.15					11	0.15		
		LA-W913-6	0	0.00	Increase 20	Increase 1.02			20	1.02	139	3.07
3.1.6	Corrosive Solutions	LA-W914-0	60	0.69					60	0.69		
		LA-W914-4	90	0.36					90	0.36		
		LA-W914-5	39	0.12					39	0.12		
		LA-W914-6	0	0.00	Increase 8	Increase 0.04			8	0.04	197	1.21
3.1.6	Aqueous Cyanides, Nitrates, Chromates, and Arsenates	LA-W915-0	9	0.13					9	0.13		
		LA-W915-4	3	0.002					3	0.002		
		LA-W915-5	11	0.04					11	0.04	23	0.17
3.1.7	Water-Reactive Wastes	LA-W916-0	78	6.03					78	6.03		
		LA-W916-4	26	0.31					26	0.31		
		LA-W916-5	4	0.03					4	0.03		
		LA-W916-6	0	0.00	Increase 5	Increase 0.68			5	0.68	113	7.05
3.1.8	Compressed Gases Requiring Scrubbing	LA-W917-0	13	0.35					13	0.35	13	0.35

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.9	Compressed Gases Requiring Oxidation	LA-W918-0	6	0.08					6	0.08		
		LA-W918-4	168	1.23					168	1.23		
		LA-W918-5	2	0.01					2	0.01		
		LA-W918-6	0	0.00	Increase 1	Increase 0.0002			1	0.0002	177	1.32
3.1.10	Elemental Mercury	LA-W920-0	45	0.50					45	0.50		
		LA-W920-4	20	0.02					20	0.02		
		LA-W920-5	9	0.02					9	0.02		
		LA-W920-6	0	0.00	Increase 5	Increase 0.12			5	0.12	79	0.66
3.2.1	Halogenated Organic Liquids	LA-W907-0	384	16.58	Decrease 3	Decrease 0.0076			381	16.57		
		LA-W907-4	97	1.05					97	1.05		
		LA-W907-5	31	0.49					31	0.49		
		LA-W907-6	0	0.00	Increase 16	Increase 0.15			16	0.15	525	18.26

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Nonhalogen-ated Organic Liquids	LA-W908-0	275	14.34	Increase 0[g] Decrease 4 Decrease 0[h]	Increase 0.076 Decrease 0.49 Decrease 0.11			271	13.82		
		LA-W908-4	409	3.38					409	3.38		
		LA-W908-5	130	2.91					130	2.91		
		LA-W908-6	0	0.00	Increase 33	Increase 0.09			33	0.09	843	20.20
3.2.1	Bulk Oils	LA-W909-0	28	3.75	Increase 0[i] Decrease 23	Increase 0.47 Decrease 2.22			5	2.00		
		LA-W909-4	8	1.48					8	1.48		
		LA-W909-5	28	2.28					28	2.28		
		LA-W909-6	0	0.00	Increase 4	Increase 0.05			4	0.05	45	5.81
3.2.1	PCB Wastes with RCRA Components	LA-W910-0	4	0.74	Increase 6	Increase 0.62[b]			10	1.36		
		LA-W910-6	0	0.00	Increase 30	Increase 1.39			30	1.39	40	2.75

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Liquid and Solid Oxidizers	LA-W923-0	6	0.117					6	0.117		
		LA-W923-4	67	0.145					67	0.145		
		LA-W923-5	13	0.317					13	0.317		
		LA-W923-6	0	0.00	Increase 7	Increase 0.795			7	0.795	93	1.37
3.3	Lead Waste - TBD	LA-W924-0	129	40.16					129	40.16	129	40.16
3.3	Mercury Wastes - TBD	LA-W925-0	63	18.30					63	18.30		
		LA-W925-4	37	0.42					37	0.42		
		LA-W925-5	14	1.52					14	1.52		
		LA-W925-6	0	0.00	Increase 23	Increase 0.67			23	0.67	137	20.91
3.3	Compressed Gases - TBD	LA-W926-0	10	1.25					10	1.25	10	1.25
3.3	Biochemical Laboratory Wastes	LA-W927-0	9	1.34					9	1.34	9	1.34
3.3	Dewatered Treatment Sludge	LA-W928-0	61	12.71					61	12.71	61	12.71
3.3	Explosives	LA-W932-0	0	0.00					0	0.00		
		LA-W932-4	1	0.000001					1	0.000001	1	0.000001

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Lab Packs	LA-W933-0	0	0.00					0	0.00		
		LA-W933-4	114	0.17					114	0.17		
		LA-W933-5	28	0.13					28	0.13		
		LA-W933-6	0	0.00	Increase 6	Increase 0.003	Increase 1	Increase 0.00002[j]	7	0.003	149	0.30
3.4.1	Lead for Surface Decontamin-ation	LA-W930-0	36	33.43	Decrease 1 Decrease 4 Decrease 6 Decrease 2	Decrease 0.11[k] Decrease 0.35[k] Decrease 1.04 Decrease 5.66			23	26.27		
		LA-W930-5	115	23.75	Decrease 1 Decrease 3	Decrease 0.21[k] Decrease 0.62[k]			111	22.92		
		LA-W930-6	0	0.00	Increase 14	Increase 12.06			14	12.06	148	61.25

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.4.2	Nonradioactive or Suspect Waste Items to be Surveyed	LA-W929-0	2	0.0076	Decrease 2	Decrease 0.0076			0	0.00		
		LA-W929-5	1	0.00002			Decrease 1	Decrease 0.00002[j]	0	0.00	0	0.00
None[l]	Lead Requiring Sorting	LA-W931-0	23	4.76	Decrease 23 Increase 0[m]	Decrease 4.78 Increase 0.02			0	0.00		
		LA-W931-5	8	0.44					8	0.44		
		LA-W931-6	0	0.00	Increase 4	Increase 0.64			4	0.64	12	1.08
None[n]	IPA	None	0	0.00	Increase 1 Decrease 1	Increase 0.0005[n] Decrease 0.0005[n]			0	0.00	0	0.00

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Category	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)			Items	Volume (m^3)	Items	Volume (m^3)
3.5	Missing/ nonexistent/ TBV	NONE (Revision 5)	48	8.81					48	8.81	48	8.81

NOTES:

[a] This correction in LA-W904 volume arises from an error in the Appendix B in Revision 4/5 as discussed in Revision 6.0.
[b] This transfer of LA-W904 waste to LA-W910 was approved by NMED on September 18, 1997 as discussed in Revision 6.0
[c] This transfer of LA-W904 waste to LA-W911 was approved by NMED on September 18, 1997 as discussed in Revision 6.0
[d] This correction in LA-W906 volume arises from an error in the Appendix B in Revision 4/5 as discussed in Revision 6.0.
[e] The volume increase arises from the return of unused treatability study sample. It has been returned to the original inventory of LA-W919 (subgroup -0) consistent with the inventory subgroup from which the sample was removed.
[f] These 5 items in subgroups LA-W921-0 and -5 (0.89 m^3 total) were shipped on December 9, 1996 as discussed in DOE's letter dated December 24, 1996.
[g] This increase in LA-W908 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[h] This decrease in LA-W908 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[I] This correction in LA-W909 volume arises from an error in Appendix B in Revision 4/5 as discussed in Revision 6.0.
[j] This transfer of LA-W929 waste to LA-W933 is discussed in Revision 6.0.
[k] The shipment of 0.32 m^3, as reported in the FY97 STP *Annual Update*, consisted of 1 item (0.11 m^3) from subgroup LA-W930-0 and 1 item (0.21 m^3) from subgroup -5. The shipment of 0.97 m^3, as reported in the FY97 STP *Annual Update*, consisted of 4 items (0.35 m^3) from subgroup -0 and 3 items (0.62 m^3) from subgroup -5.
[l] This treatability group (LA-W931, *Lead Requiring Sorting*) is not listed in the CPV; however it is discussed in section 3.4.3 of the *Background Volume*.
[m] This increase in LA-W931 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[n] This item of isopropyl alcohol waste was not included in the original STP inventory and it was shipped for treatment as discussed in DOE's letter dated January 9, 1997.

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.1	IPA Wastes	LA-W901-0	104	15.89							Decrease 96	Decrease 15.87	Decrease 1	Decrease 0.0005[b]	7	0.02		
		LA-W901-5									Increase 0 Decrease 0	Increase 4.11[c] Decrease 4.11			0	0.00	7	0.02
3.1.1	Scintillation Fluids	LA-W902-0	18	2.47					Decrease 15	Decrease 2.24	Decrease 2	Decrease 0.36			1	0.0038		
		LA-W902-5									Increase 0 Decrease 0	Increase 0.13[c] Decrease 0.13			0	0.00	1	0.0038
3.1.2	Lead Blankets	LA-W903-0	4	0.74							Decrease 4	Decrease 0.74			0	0.00	0	0.00
3.1.2	Soil with Heavy Metals	LA-W904-0	59	10.53									Decrease 1	Decrease ~~0.2082~~ 0.1047[d,i] *(see Rev 6.0 for correction)*	58	~~10.33~~ 10.43		
		LA-W904-5									Increase 1	Increase 0.11			1	0.11	59	10.54 ~~10.44~~

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.2	ER Soils	LA-W905-0	36	39.32							Decrease 36	Decrease 39.32			0	0.00	0	0.00
3.1.3	Aqueous Organic Liquids	LA-W906-0	45	1.65											45	1.65		
		LA-W906-4					Increase 27	Increase 0.36							27	0.36		
		LA-W906-5							Increase 3	Increase 0.43	Increase 73	Increase 3.62	Increase 1 Increase 24	Increase 0.0005[b] Increase ~~4.83~~ 4.26[c, i] *(see Rev 6.0 for correction)*	101	~~8.88~~ 8.31	173	10.32 ~~10.89~~
3.1.4	Organic-Contaminated Combustible Solids	LA-W911-0	307	28.32					Decrease 1	Decrease 0.11	Decrease 1	Decrease 0.11			305	28.10		
		LA-W911-4					Increase 33	Increase 0.68							33	0.68		
		LA-W911-5							Increase 2	Increase 0.17	Increase 31	Increase 5.24	Increase 7	Increase 1.46[e]	40	6.87	378	35.65

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.4	Organic-Contaminated Noncombustible Solids	LA-W919-0	80	7.82					Decrease 1	Decrease 0.11					79	7.71		
		LA-W919-4					Increase 9	Increase 0.38							9	0.38		
		LA-W919-5							Increase 9	Increase 0.001	Increase 74	Increase 9.58	Increase 6	Increase 0.95[e]	89	10.53	177	18.62
3.1.5	Combustible Debris	LA-W912-0	83	13.82											83	13.82		
		LA-W912-4					Increase 9	Increase 0.75							9	0.75		
		LA-W912-5									Increase 5	Increase 0.28			5	0.28	97	14.85
3.1.5	Activated or Inseparable Lead	LA-W921-0	74	15.60					Decrease 37	Decrease 7.42	Decrease 23	Decrease 3.41			14	4.77		
		LA-W21-5							Increase 51	Increase 10.11	Decrease 45 Increase 12	Decrease 9.05 Increase 2.29			18	3.35	32	8.12

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.5	Non-combustible Debris	LA-W922-0	41	5.62					~~Decrease~~ ~~1~~	~~Decrease~~ ~~.0002~~ [h]					41	5.62		
		LA-W922-4					Increase 53	Increase 2.83							53	2.83		
		LA-W922-5							Increase 21	Increase 1.25	Increase 42	Increase 21.04			63	22.29	157	30.74
3.1.6	Aqueous Wastes with Heavy Metals	LA-W913-0	203	1.85							Decrease 12 Decrease 108	Decrease 0.030 Decrease 0.32			83	1.50		
		LA-W913-4					Increase 25	Increase 0.40							25	0.40		
		LA-W913-5									Increase 11	Increase 0.15			11	0.15	119	2.05
3.1.6	Corrosive Solutions	LA-W914-0	162	1.36							Decrease 102	Decrease 0.67			60	0.69		
		LA-W914-4					Increase 90	Increase 0.36							90	0.36		
		LA-W914-5							Increase 13	Increase 0.04	Increase 26	Increase 0.08			39	0.12	189	1.17

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.6	Aqueous Cyanides, Nitrates, Chromates, and Arsenates	LA-W915-0	15	0.13					Decrease 1	Decrease 0.0003	Decrease 1 Decrease 4	Decrease 0.0002 Decrease 0.0031			9	0.13		
		LA-W915-4					Increase 3	Increase 0.002							3	0.002		
		LA-W915-5							Increase 4	Increase 0.02	Increase 7	Increase 0.02			11	0.04	23	0.17
3.1.7	Water-Reactive Wastes	LA-W916-0	78	6.03											78	6.03		
		LA-W916-4					Increase 26	Increase 0.31							26	0.31		
		LA-W916-5							Increase 1	Increase 0.02	Increase 3	Increase 0.01			4	0.03	108	6.37
3.1.8	Compressed Gases Requiring Scrubbing	LA-W917-0	13	0.35											13	0.35	13	0.35
3.1.9	Compressed Gases Requiring Oxidation	LA-W918-0	6	0.08											6	0.08		
		LA-W918-4					Increase 168	Increase 1.23							168	1.23		
		LA-W918-5									Increase 2	Increase 0.01			2	0.01	176	1.32

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.10	Elemental Mercury	LA-W920-0	45	0.50											45	0.50		
		LA-W920-4					Increase 20	Increase 0.02							20	0.02		
		LA-W920-5									Increase 9	Increase 0.02			9	0.02	74	0.54
3.2.1	Halogenated Organic Liquids	LA-W907-0	385	16.58							Decrease 1	Decrease 0.0025			384	16.58		
		LA-W907-4					Increase 97	Increase 1.05							97	1.05		
		LA-W907-5							Increase 13	Increase 0.04	Increase 18	Increase 0.45			31	0.49	512	18.12
3.2.1	Nonhalogenated Organic Liquids	LA-W908-0	275	14.34											275	14.34		
		LA-W908-4					Increase 409	Increase 3.38							409	3.38		
		LA-W908-5							Increase 53	Increase 0.08	Increase 77	Increase 2.83			130	2.91	814	20.63

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Bulk Oils	LA-W909-0	28	3.75											28	3.75		
		LA-W909-4					Increase 8	Increase 1.48							8	1.48		
		LA-W909-5									Increase 28	Increase 2.28			28	2.28	64	7.51
3.2.1	PCB Wastes with RCRA Components	LA-W910-0	4	0.74											4	0.74	4	0.74
3.2.1	Liquid and Solid Oxidizers	LA-W923-0	55	0.20							Decrease 49	Decrease 0.0834			6	0.117		
		LA-W923-4					Increase 67	Increase 0.145							67	0.145		
		LA-W923-5							Increase 24	Increase 0.32	Decrease 11	Decrease 0.0034			13	0.317	86	0.58
3.3	Lead Waste - TBD	LA-W924-0	186	51.44					Decrease 57	Decrease 11.28					129	40.16	129	40.16
3.3	Mercury Wastes - TBD	LA-W925-0	63	18.30											63	18.30		
		LA-W925-4					Increase 37	Increase 0.42							37	0.42		
		LA-W925-5									Increase 14	Increase 1.52			14	1.52	114	20.24
3.3	Compressed Gases - TBD	LA-W926-0	10	1.25											10	1.25	10	1.25

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Biochemical Laboratory Wastes	LA-W927-0	9	1.34											9	1.34	9	1.34
3.3	Dewatered Treatment Sludge	LA-W928-0	1288	268.17	Decrease 1227	Decrease 255.46									61	12.71	61	12.71
3.4.1	Lead for Surface Decontamination	LA-W930-0	125	56.20					Decrease 83	Decrease 14.43[f]			Decrease 6	Decrease 8.34[d]	36	33.43		
		LA-W930-5							Increase 109	Increase 22.50	Increase 6	Increase 1.25			115	23.75	151	57.18
3.4.2	Nonradioactive or Suspect Waste Items to be Surveyed	LA-W929-0	1250	14.24			Decrease 1196 Decrease 41	Decrease 13.97 Decrease 0.26[d]	~~Decrease 4~~	~~Decrease 0.002~~[h]	Decrease 2 Decrease 9	Decrease 0.00094 Decrease 0.0029			2	0.0076[g]		
		LA-W929-5							Increase 1	Increase .00002					1	0.00002	3	0.0076[g]
None	Lead Requiring Sorting	LA-W931-0	48	9.97					Decrease 22	Decrease 4.58	Decrease 3	Decrease 0.63			23	4.76		
		LA-W931-5							Increase 28	Increase 5.73	Decrease 28 Increase 8	Decrease 5.73 Increase 0.44			8	0.44	31	5.20

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Explosives	LA-W932-0	0	0.00											0	0.00		
		LA-W932-4					Increase 1	Increase 0.000001							1	0.000001	1	0.000001
3.3	Lab Packs	LA-W933-0	0	0.00											0	0.00		
		LA-W933-4					Increase 114	Increase 0.17							114	0.17		
		LA-W933-5									Increase 28	Increase 0.13			28	0.13	142	0.30

CPV Section	Category	MWIR ID (by substream)	October, 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.5	Missing/ non-existent/ TBV	NONE											Increase 1 Increase 41 Increase 6	Increase 0.2082[d] Increase 0.26[d] Increase 8.34[d]			48	8.81

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

NOTES:

[a] Changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY96; however, only those reported as Rev. 5.0 "*Other Changes*" are included in this table. All others will be reported in the March, 1998 FY97 *Annual Update* and associated revision request. Therefore, the *"Net Covered Waste Inventory"* may not fully reflect the ACTUAL CPV covered waste inventory as of the date of this revision, in some instances.

[b] As reported in DOE's January 31, 1997 letter, the volume associated with the 104th LA-W901-0 item (0.0005 m^3) was repackaged, and bulked with other LA-W906 wastes in 1991, prior to issuance of the original STP. Since this "*missing*" item has now been located, its volume is being formally transferred to LA-W906 and will be managed as such.

[c] The 4.11 m^3 volume shown for LA-W901, and the 0.13m^3 volume shown for LA-W902 are corrections, to reflect the actual volumes shipped in FY96. As reported in the March, 1997 FY96 *Annual Update*, the volume changes for LA-W901 and LA-W902 in FY96 were based on current data in LANL's waste database. They are consistent with the original documentation submitted by the waste generator, and they are representative of actual volumes of these wastes when shipped for treatment. The volumes used during the preparation of the original STP were erroneous, thereby resulting in more waste being shipped than reported in the original STP inventory. This volume inconsistency was discussed in DOE's January 31, 1997 letter.

[d] These items from LA-W904, LA-W929, and LA-W930 have been determined to be missing or nonexistent. They are being transferred to the category *"Missing/Nonexistent/TBV"* until their presence or absence are fully and finally verified.

[e] Although a number of changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY96, only those reported here as Rev. 5.0 "*Other Changes*" are included in this table. These represent additional waste items that became covered waste after the end of FY96, for which opportunities exist for treatment during FY98. All other covered waste inventory changes since the end of FY96 will be reported in the March, 1998 FY97 *Annual Update*.

[f] This represents a correction to the March, 1996 FY95 *Annual Update* for LA-W930, which had reported that 84 items (14.64 m^3) had been 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.

[g] Two items in the original STP inventory for LA-W929, *Sort, Survey, and Decontamination*, were shipped to DSSI for treatment on December 18, 1996. This change in the covered waste volume will be reflected in the March,1998 FY97 *Annual Update*, and will be deleted from the CPV inventory in the associated revision. Therefore, these two items were reported as treated in the various submittals associated with Revision 4 of the STP, but were reported in the March, 1997 FY96 *Annual Update* (and are shown here) as having been in inventory as of September 30, 1996.

[h] This represents a correction to the March, 1996 FY95 *Annual Update*. It was reported that one LA-W922 item (0.0002 m^3) and 4 LA-W929 items (0.002 m^3) had been removed from inventory. This was incorrect because these items had been repacked into different containers, and are still in inventory.

[i] For LA-W906, Rev. 5.0 (Other Changes), the correct volume associated with this increase is 4.26 m^3 for LA-W904, Rev. 5.0 (Other Changes), the correct decrease is 0.105 m^3. Both of these corrrections are discussed and implemented in Rev 6.0.

ENCLOSURE F

CERTIFICATION STATEMENT

ANNUAL SITE TREATMENT PLAN UPDATE FOR FISCAL YEAR 1997 AND PROPOSED COMPLIANCE PLAN VOLUME REVISION 6.0

ENCLOSURE F

CERTIFICATION

FY97 SITE TREATMENT PLAN *ANNUAL UPDATE* AND PROPOSED REVISION 6.0 TO COMPLIANCE PLAN VOLUME, LOS ALAMOS NATIONAL LABORATORY FEDERAL FACILITY COMPLIANCE ORDER, OCTOBER 4, 1995.

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.

Kenneth M. Hargis

Kenneth M. Hargis
Project Manager, EM/WM Programs
Los Alamos National Laboratory
Operator

30 March 1998
Date Signed

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

3/30/98
Date Signed

EXHIBIT A

LOS ALAMOS NATIONAL LABORATORY

MIXED WASTE SITE TREATMENT PLAN

COMPLIANCE PLAN VOLUME (CPV)

BACKGROUND VOLUME

Revision 6.0

July 1998

(Rev. 6.0 7/98)

1.0 PURPOSE AND SCOPE OF THE COMPLIANCE PLAN VOLUME

1.1 Introduction

On October 6, 1992, Congress passed the Federal Facility Compliance Act (FFC Act) to address compliance by the United States Department of Energy (DOE) with the land disposal restrictions (LDR) for the storage of mixed waste set forth in Section 3004(j) of RCRA. The FFC Act requires the DOE to submit a Site Treatment Plan (STP) for developing treatment capacities and technologies to treat all of the facility's mixed waste, regardless of the time generated, to the standards promulgated pursuant to Section 3004(m) of RCRA. The FFC Act provides that the appropriate regulatory authority, the New Mexico Environment Department (NMED), may approve, approve with modifications or disapprove the STP. Prior to making such a determination, NMED is required by FFC Act to provide public notice, consider public comments, consult with the Environmental Protection Agency (EPA) and any other state in which a facility affected by the STP is located.

On March 31, 1995, DOE submitted its proposed STP to NMED for the treatment of mixed waste at the Los Alamos National Laboratory (LANL). On April 17, 1995, the public was given notice of and an opportunity to comment to NMED on the draft STP submitted by DOE. After considering public comment and otherwise complying with the FFC Act, NMED determined to approve the draft STP with modifications as provided in this document.

The STP is intended to fulfill the requirements of the FFC Act and establish an enforceable framework to allow DOE and the Regents of the University of California (Respondents) to achieve full compliance with LDR requirements under the New Mexico Hazardous Waste Act (HWA) and RCRA. The compliance dates set forth herein are enforceable time periods in which Respondents are required to develop treatment capacities and technologies, and treat or otherwise meet the requirements set forth for LDR under the HWA and RCRA. The STP will be fully implemented by a Compliance Order issued by NMED on or before October 6, 1995.

1.2 Contents

The STP contains two volumes and is intended to bring Respondents into compliance with LDR storage prohibitions under the HWA and RCRA. The Compliance Plan Volume of the STP provides overall schedules, including compliance dates, for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The Compliance Plan includes a schedule for the submittal of applications for permits, construction of treatment facilities, technology development, off-site transportation for treatment, and the treatment of mixed wastes in full compliance with the HWA and the implementing regulations at 20 NMAC 4.1, which

incorporates by reference 40 CFR Parts 260 through 270. The Background Volume of the STP contains progress reports as required in the Compliance Order. Respondents shall carry out the activities described in the STP, including the Compliance Plan Volume of the STP, in accordance with the schedules and requirements set forth in the STP and the Order.

1.3 STP Revisions and Amendments

The STP Compliance Plan Volume (CPV) has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order (FFCO), as amended and revised. Appendix A to the CPV provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

2.0 Compliance Schedules

The STP provides overall schedules for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The schedules include those activities required to bring existing waste treatment technologies into operation, process backlogged and currently generated waste, include schedules required to develop new facilities and capacity for treatment and establish an overall time frame for achieving compliance with the LDR requirements under the HWA and 20 NMAC 4.1.

2.1 Categories of Activities for Compliance Dates

The categories of activities for which compliance dates will be provided for different types of treatment approaches in the STP are listed in the tables below. The categories of activities are based on Section 3021(b)(1)(B)(I), (ii), and (iii) of the RCRA, to the extent appropriate.

2.1.1 Plans Where Treatment Technology Exists

For most of the mixed waste, treatment technologies have been identified and developed. For the waste that will be treated on-site, the categories of activities for compliance dates identified in Table I shall apply. Compliance dates for the activities identified in Table I may be found in Section 3.1.

Table I. Categories of Activities for Compliance for Mixed Waste with Existing Treatment Technologies.

A.	Submit permit applications to the NMED.
B.	Initiate construction as specified in the NMED permit.
C.	Complete system testing and commence operation.
D.	Begin treating mixed waste.
E.	Complete treatment of existing wastes to applicable regulatory standards.

2.1.2 Plans Where Technology Must Be Developed

For some mixed waste, no treatment technologies have been identified and developed, or the treatment technology must be modified or adapted to apply to such waste. For the waste that will be treated on-site, the categories of activities for compliance dates are identified in Table II and shall apply. Compliance dates for the activities identified in Table II may be found in Section 3.2.

Table II. Categories of Activities for Compliance Dates for Mixed Waste Without Existing Treatment Technologies.

A. Identify and develop technology.
B. Submit permit application to NMED; or
C. Submit a Notification of Intent to perform treatability study to NMED a minimum of 45 days prior to commencement of the study.
D. Initiate construction as specified in the NMED.
E. Commence systems testing.
F. Begin treating mixed waste.
G. Complete treatment of existing wastes to applicable regulatory standards.

2.1.3 Requirements Pertaining to Radionuclide Separation

The FFC Act sets additional requirements in cases in which DOE intends to conduct radionuclide separation of mixed waste. Should the DOE determine to do radionuclide separation of such mixed waste, DOE will schedule specific compliance dates based on category activities identified in Table III. "Radionuclide separation" shall mean segregating the radioactive portion of the mixed waste from the hazardous portion of the mixed waste.

Table III. Categories of Activities for Compliance Dates for Radionuclide Separation of Mixed Waste

A.	Complete an estimate of the volume of waste generated by each case of radionuclide separation.
B.	Complete an estimate of the volume of waste that would exist or be generated without radionuclide separation.
C.	Complete an estimate of the costs of waste treatment and disposal if radionuclide separation is used compared with the estimated costs if it is not used.
D.	Provide the assumptions underlying such estimates of waste volumes and cost estimates.
E.	Provide characterization methodologies for determining waste type.
F.	Submit a plan for treating or managing hazardous waste residues, accompanied by a NMED permit application.

2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment

In lieu of plans to treat mixed-waste on-site, DOE may treat waste at an off-site facility (at a commercial or non-commercial mixed waste treatment facility), or DOE may recycle waste at an off-site facility. Should DOE elect to use off-site recycling facilities in lieu of (or in combination with) treatment, it will follow the requirements prescribed in this Section in the same manner as if the waste was being shipped off-site for treatment. Any and all requirements

imposed by the off-site treatment/recycling facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment/recycling site shall be met by Respondents.

DOE shall notify the NMED Project Manager in writing as soon as possible if mixed waste is planned to be sent to a non-commercial facility. Notification should be made if possible when DOE is first considering such an option to allow NMED and the state to address any state issues or concerns with other states. The NMED Project Manager shall approve in writing the proposed off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility. Activities for mixed waste to be shipped off-site for treatment/recycling at a non-commercial facility are identified in Table V.

Should DOE decide to treat or recycle waste at a commercial off-site facility, DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility.

Table IV. Activities for Mixed Waste to be Shipped Off-Site for Treatment or Recycling at a Commercial facility

A.	Meet all regulatory requirements for off-site shipment.
B.	Provide documentation to NMED that waste has been received at an off-site facility for treatment or recycling within 45 working days of receipt of waste at the treatment facility.

2.1.4.1 Specific Site Requirements for Non-commercial Treatment Facilities

Shipment to Idaho National Engineering Laboratory

Prior to shipment, Idaho National Engineering Laboratory and Idaho Division of Environmental Quality shall be notified of any pending shipments of waste prior to shipment should DOE ship mixed low-level waste to INEL. Proper procedures including additional approvals (if necessary) and documentation shall be completed prior to the shipment of wastes to INEL. Management of post-treatment waste residuals or newly generated waste streams will be in accordance with the requirements of DOE, the State of Idaho and that state where they will be disposed. A modification to LANL's RCRA permit providing for the return of such wastes and/or residues to LANL must be approved by NMED prior to any such return of wastes and/or residuals to LANL. DOE will notify the NMED Project Manager in writing as soon as possible, and in any

event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams from INEL.

Shipments of low-level mixed wastes to planned facilities (not yet existing) will occur only after that treatment and schedules are approved by DOE-ID and the State of Idaho. Upon approval of the planned treatment facilities, the applicable protocol from the paragraph above will be implemented for mixed wastes to be treated at planned facilities.

Shipment to Oak Ridge Reservation

In the case that Oak Ridge Reservation (ORR) may not dispose of mixed-waste residues or new waste streams generated from off-site treatment, and they cannot be sent to another facility for disposal, then the residues may return to LANL. Should residual or newly generated waste streams be returned to LANL, the proper permits for the State of New Mexico must exist. DOE will notify the NMED Project Manager in writing as soon as possible, and in any event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams from ORR.

Table V. Activities for Mixed Waste to be Shipped Off-Site for Treatment or Recycling at a Non-commercial facility

A.	Request necessary approval from NMED for shipment of waste by category before shipping.
B.	Meet all regulatory requirements for off-site shipment.
C.	Provide documentation to NMED of confirmation of shipment date within 14 working days prior to sending waste to an off-site facility for treatment, disposal, or recycling, or storage pending treatment, disposal, or recycling.
D.	Provide documentation to NMED that waste has been received at an off-site facility for treatment within 45 working days of receipt of waste at the off-site facility.
E.	Meet all regulatory requirements to include RCRA Permit modifications for residual or newly generated waste streams after treatment or recycling.
F.	Provide documentation to NMED within 30 working days after receipt of residual or newly generated waste streams upon return to LANL.

2.1.5 Plans Related to Other Mixed Waste Activities

1. Activities other than the types of activities specifically called for in the FFC Act as requiring schedules are described in this STP. Some of these activities may be associated

with schedules which may contain compliance dates related to treatment of the DOE's mixed waste.

2. For mixed waste which is not sufficiently characterized to allow identification of appropriate treatment, notification of the characterization of such waste shall be in accordance with the annual update process described in the Compliance Order. If such characterization results in the addition or deletion of a treatability group or an increase in volume in a treatability group, a revision would be required pursuant to Section X of the Compliance Order.

3.0 LOW-LEVEL MIXED WASTE STREAMS

This Chapter presents proposed schedules for treatment technologies and the preferred options to treat low-level mixed waste streams (MLW or LLMW) at LANL. All preferred options not described below must be approved by NMED in accordance with the revision process pursuant to the Compliance Order.

The original October 4, 1995 STP inventory in each MLLW treatability group has been modified through the revision process in the FFCO. The table in CPV Appendix B provides a comprehensive summary of changes to the CPV covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of this revision. In Appendix B, the original STP inventory in each MLLW treatability group is denoted as subgroup 0 of that treatability group (e.g., the original volume of STP treatability group LA-W906 became LA-W906-0). Each revision that has since added volumes to individual treatability groups has resulted in creation of an additional subgroup, having the same number as the revision (e.g., LA-W906-4 was created in Revision 4.0, and LA-W906-5 was created in Revision 5.0).

In most Sections of this chapter, the subgroups of the treatability groups are not shown. In those cases, the Activities and Compliance Dates are applicable to the entire net volume of that treatability group. However, when subgroups of a treatability group have been assigned Activities and Compliance Dates unique to that subgroup, those subgroups are detailed in the text. For a complete listing of volumes by subgroup for all treatability groups, please refer to Appendix B.

3.1 Mixed Waste Streams for Which Technology Exists

The following subsections summarize LLMW treatability groups for which technology exists.

3.1.1 Off-site Treatment by Thermal Treatment

Treatability Group(s):

LLMW for Thermal Treatment (MWIR Treatment ID DS-S001)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
IPA wastes	LA-W901	D001, D009, F002, F003, F005	0	0.00
scintillation fluids	LA-W902	D001, F003, F005	0	0.00
Totals			**0**	**0.00**

Treatment Technology:

The waste will be treated at an off-site facility that combusts organic liquid waste. Should DOE decide to treat waste at an off-site non-commercial facility, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	9/30/96
B. Complete shipping waste	12/30/96
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.2 Off-site Treatment by Stabilization or Macroencapsulation

Treatability Group(s):

LLMW for Stabilization

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (M^3)
lead blankets	LA-W903	D007, D008	0	0.00
soil with heavy metals	LA-W904	D004, D005, D006, D007, D008, D009, D010, D011	3	0.45
ER soils	LA-W905	D028, D029, F001, F005 D010, D011	0	0.00
Totals			3	0.45

Treatment Technology:

The waste will be treated at an off-site facility that stabilizes or macroencapsulates wastes. Should DOE decide to treat waste at an off-site non-commercial facility, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	05/30/97
B. Complete shipping waste	12/30/98
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.3 Evaporative Oxidation (MWIR Treatment ID GJ-S801C)

Treatability Group(s):

LLMW for Evaporative Oxidation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906-0 LA-W906-4 LA-W906-5	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D030, D032, D033, D034, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	173	10.32
Totals			**173**	**10.32**

Note: See below for additional wastes in this treatability group

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site treatment facility (commercial or non-commercial) and state regulatory, federal regulatory or other regulatory requirements applicable

at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	12/30/96
B. Initiate construction	As specified in the NMED permit.
C. Complete system test and commence operation and begin treating mixed waste	6/19/99
D. Complete treatment of existing wastes to applicable regulatory standards, or	2/09/00
E. Complete shipment of existing wastes for treatment to an off- site facility.	2/09/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes

The following additional wastes will require management in this category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906-6	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D030, D032, D033, D034, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	88	5.74
Totals			**88**	**5.74**

Activities for wastes belonging to this treatability subgroup.

Activity	Compliance Dates
G. Complete shipment of existing wastes for treatment to an off- site facility.	2/09/03
H. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.4 Thermal Desorption (MWIR Treatment ID GJ-S801B)

LLMW for Thermal Desorption/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
organic-contaminated combustible solids	LA-W911	D001, D004, D008, D009, F001, F002, F003, F005	381	36.07
Totals			**381**	**36.07**

LLMW for Thermal Desorption

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
organic-contaminated noncombustible solids	LA-W919	D001, D003, D004, D005, D006, D007, D008, D009, D010, D011, D012, D015, D018, D019, D020, D022, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D042, D043, F001, F002, F003, F004, F005	227	27.31
Totals			**227**	**27.31**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	11/16/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	02/01/01
D. Complete treatment of existing wastes to applicable regulatory standards, or	02/14/02
E. Complete shipping of existing wastes to an off-site treatment facility.	02/14/02
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.5 Macroencapsulation (MWIR Treatment ID PX-S803)

Treatability Group(s):

LLMW for Macroencapsulation/Off-site treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
combustible debris	LA-W912	D001, D002, D003, D005, D006, D007, D008, D009, D011, D035, F001, F002, F003, F005	103	15.17
Totals			**103**	**15.17**

LLMW for Macroencapsulation

Treatability group		RCRA codes	Number of items	Net volume (m^3)
activated or inseparable lead	LA-W921	D008	34	7.09
noncombustible debris	LA-W922	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011	191	36.46
Totals			**225**	**43.55**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/04/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operation and begin treating mixed waste	02/01/00
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/25/00
E. Complete shipping of existing wastes to an off-site treatment facility.	08/25/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.6 Chemical Plating Waste Treatment Skid (MWIR Treatment ID LA-S004)

Treatability Group(s):

LLMW for Chemical Plating Waste Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous wastes with heavy metals	LA-W913	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011	139	3.07
corrosive solutions	LA-W914	D001, D002	197	1.21
aqueous cyanides, nitrates, chromates, and arsenates	LA-W915	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, F007, P029, P098	23	0.17
Totals			**359**	**4.45**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the

affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Resubmit revised permit application to NMED	10/30/96
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	03/17/00
D. Complete treatment of existing wastes to applicable regulatory standards, or	05/08/01
E. Complete shipping of existing wastes to an off-site treatment facility.	05/08/01
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.7 Water-reactive Metals Treatment Skid (MWIR Treatment ID LA-S003)

Treatability Group(s):

LLMW for Water-Reactive Metals Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
water-reactive wastes	LA-W916	D001, D003, D004, D005, D007, D008, D010, D011	113	7.05
Totals			**113**	**7.05**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	06/30/01
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	09/09/03
D. Complete treatment of existing wastes to applicable regulatory standards, or	04/21/04
E. Complete shipping of existing wastes to an off-site treatment facility.	04/21/04
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.8 Gas-scrubbing Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas-Scrubbing Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
compressed gases requiring scrubbing	LA-W917	D001, D002, P056	13	0.35
Totals			**13**	**0.35**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/28/03
E. Complete shipping of existing wastes to an off- site treatment facility.	08/28/03
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.9 Gas Oxidation Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas Oxidation Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
compressed gases requiring oxidation	LA-W918	D001, U226	177	1.32
Totals			**177**	**1.32**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/28/03
E. Complete shipping of existing wastes to an off-site treatment facility.	08/28/03
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.10 Mercury Amalgamation (MWIR Treatment ID PI-S801)

Treatability Group(s):

LLMW for Amalgamation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
elemental mercury	LA-W920	D006, D009, F005	79	0.66
Totals			**79**	**0.66**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/30/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	06/05/00
D. Complete treatment of existing waste to applicable regulatory standards, or	11/15/00
E. Complete shipping of existing wastes to an off-site treatment facility.	11/15/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.2 Mixed Waste Streams for Which Technology Requires Adaptation or for Which No Technology Exists

The following subsections summarize mixed waste streams for which technology requires adaptation or for which no technology exists.

3.2.1 Hydrothermal Processing

Treatability Group(s):

LLMW for Hydrothermal Processing/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
halogenated organic liquids	LA-W907	D001, D002, D003, D007, D009, D010, D011, D018, D019, D022, D028, D029, D035, D043, F001, F002, F003, F004, F005, U077, U080, U226, U227, U228, U236	525	18.26
nonhalogenated organic liquids	LA-W908	D001, D002, D003, D004, D007, D008, D009, D011, D018, D038, D040, F002, F003, F004, F005, U002, U019, U154, U169, U188, U220, U246	843	20.20
bulk oils	LA-W909	D002, D004, D005, D006, D007, D008, D009, D010, D011, D021, D027, D039, F001, F002, F003, F005	45	5.81
PCB wastes with RCRA components	LA-W910	D004, D005, D006, D007, D008, D009, D010, D011, D012, D015, D019, D027, D028, D030, D031, D032, D033, D034, D036, D039, D042, D043, F002, F003, F004, F005	40	2.75
Totals			**1453**	**47.02**

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
Liquid and solid oxidizers	LA-W923	D001, D003, D005	93	1.37
Totals			**93**	**1.37**

Treatment Technology:

The preferred destruction treatment technology option for this treatability group is Hydrothermal Processing which is a technology that needs development for adaptation to treat radioactive and PCB-bearing waste. This treatment technology is being adapted at LANL and is expected to be developed into a mobile treatment unit. The GJPO schedule for deployment of the unit indicates its possible availability to LANL after February 2002. Shipment off-site for treatment is a parallel preferred option. Respondents shall submit treatment or off-site shipment schedules and

options for NMED's approval by November 30, 1998. Treatment or other options other than off-site shipment shall be carried out pursuant to the revision process. Off-site shipments must be completed by February 2002.

Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

3.3 Mixed Waste Requiring Further Characterization or for Which Technology Assessment Has Not Been Done (MWIR Treatment ID LA-S701)

Treatability Group(s):

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
lead wastes - TBD	LA-W924	D003, D008	129	40.16
mercury wastes - TBD	LA-W925-0	D007, D008, D009, F001	63	18.30
compressed gases - TBD	LA-W926	D001, D007, D009, D022, P056, U080, U226	10	1.25
biochemical laboratory wastes	LA-W927	D001, D003	9	1.34
dewatered treatment sludge	LA-W928	see Subsection 3.3 in the Background Volume	61	12.71
Totals			**272**	**73.76**

Note: See below for additional wastes in some of these treatability groups

Treatment Technology:

The following steps will be taken to properly characterize this waste:

- Conduct additional generator interviews
- Prepare a sampling plan for waste not adequately characterized

- Conduct sampling and analysis
- Determine treatment options

Activities for wastes originally belonging to these treatability groups as listed above.

Activity	Compliance Dates
A. Complete generator interviews	10/30/95
B. Complete sampling and analysis plan	1/30/96
C. Complete sampling and analysis	9/30/98
D. Complete determination of treatment options	12/20/98
E. Complete shipping of existing wastes to an off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups.	12/20/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes and treatability groups:

The following additional wastes will require management in this category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	RCRA Codes	Number of items	Net volume (m3)
mercury wastes-TBD	LA-W925-4 LA-W925-5 LA-W925-6	D003, D007, D008, D009, F001, F002, F005	74	2.61
~~mercury wastes-TBD~~	~~LA-W925-5~~	~~D007, D008, D009, F001~~	~~14~~	~~1.52~~
explosives	LA-W932	D003	1	0.000001
labpacks	LA-W933	D001, D002, D003, D004, D005, D006, D007, D008, D010, F003, F005, D011, P012, P029, P098, P106, P113, P120, U131, U144, U145, U188, U190, U204, U216, U219	149	0.30
Totals			**224**	**2.91**

Activities for wastes belonging to these treatability groups and subgroups.

Activity	Compliance Dates
G. Complete sampling and analysis plan	1/30/99
H. Complete sampling and analysis	9/30/01
I. Complete determination of treatment options	12/20/01
J. Complete shipping of wastes to an off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups	12/20/03
K. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at off-site facility

3.4 Plans for Other Types of Activities

The following subsection summarizes plans for other types of activities.

3.4.1 Lead Decontamination (MWIR Treatment ID LA-S001)/Off-site Treatment (preferred option)

Treatability Group(s):

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net volume (m^3)	No. Items	Net volume (m^3)	No. Items	Net volume (m^3)
lead for surface contamination	LA-W930-0 LA-W930-5	0	0.00	134	49.19	134	49.19
Totals		**0**	**0.00**	**134**	**49.19**	**134**	**49.19**

Note: See below for additional wastes in this treatability group

Treatment Technology:

This treatability group contains two categories of lead for decontamination:

The first category is lead in the original LA-W930-0 inventory that is amenable to decontamination in the on-site lead decontamination trailer, which was designed to decontaminate simple lead shapes, such as lead bricks, of certain physical dimensions. The trailer is on-site and has operated, but needs an upgrade for prolonged operation.

The lead in the second category is lead in the original LA-W930-0 inventory that is not amenable to decontamination in the on-site lead decontamination trailer, plus subsequent additions to the original inventory shown in Appendix B. This lead will be processed using other on-site decontamination processes, such as dry sandblasting or hand-scrubbing, or sent to off-site lead decontamination services.

Any lead not acceptable for on-site or off-site lead decontamination, plus any lead unsuccessfully decontaminated, will be designated for treatment and disposal at an off-site

facility, or for recycle through an off-site capability, such as metal melting to create shielding blocks or a DOE lead bank. Non-conforming items will be reassigned to appropriate treatability groups in accordance with the FFCO.

Should DOE decide to treat or recycle waste at an off-site non-commercial facility in lieu of plans to treat or recycle such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment/recycle option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment/ recycling facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment/recycling site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility.

Lead shapes and forms in the first category.

Activity	Compliance Date
A. Complete lead decontamination	09/30/97

Lead shapes and forms in the second category.

Activity	Compliance Date
A. Provide schedule for development of lead processing techniques and options	06/30/96
B. Segregate lead waste into decontamination groupings	07/31/97
C. Complete shipment of wastes to decontamination operations, or	12/02/98
D. Determine treatment/disposal or other recycle options for lead waste not acceptable for decontamination	12/02/98
E. Complete treatment/disposal operations or other recycle operations for lead waste not acceptable for decontamination	07/31/99
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes

The following additional wastes will require management in the second category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net volume (m^3)	No. Items	Net volume (m^3)	No. Items	Net volume (m^3)
lead for surface contamination	LA-W930-6	0	0.00	14	12.06	14	12.06
Totals		**0**	**0.00**	**14**	**12.06**	**14**	**12.06**

Activities for wastes belonging to this treatability subgroup.

Activity	Compliance Date
G. Complete shipment of wastes to decontamination operations, or	12/02/99
H. Determine treatment/disposal or other recycle options for lead waste not acceptable for decontamination	12/02/99
I. Complete treatment/disposal operations or other recycle operations for lead waste not acceptable for decontamination	07/31/00
J. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.4.2 Sorting, Surveying, and Decontamination (MWIR Treatment ID GJ-S804)

Treatability Group(s):

Treatability group	MWIR waste ID	Number of items	Net volume (m^3)
1. nonradioactive or suspect waste items to be surveyed	LA-W929-0(1)	0	0.0
2. nonradioactive or suspect waste items to receive RCRA and radiological characterization	LA-W929-0(2)	0	0.00
3. nonradioactive or suspect waste items that cannot or should not be sampled	LA-W929-0(3)	0	0.0
Totals		**0**	**0.00**

Note: See below for additional wastes in this treatability group

Treatment Technology:

The waste items in part 1 of the original volume in this treatability group will be surveyed using a field operation that will survey waste suspect of radioactive contamination to determine whether it is radioactively contaminated. The work will be done on-site with equipment and staffing provided by LANL or another DOE site. Waste determined not to be radioactively contaminated will be treated using commercial facilities permitted to treat hazardous waste; waste determined to be radioactively contaminated will be assigned to applicable treatability groups and/or sent to offsite facilities for appropriate treatment.

Waste items in part 2 of this treatability group will be surveyed using complete RCRA and radiological sampling and characterization. Waste sampled under this alternative will be treated and disposed as low-level mixed waste; the waste will be assigned to applicable treatability groups and/or sent to off-site facilities for appropriate treatment based on the results of this characterization.

Sampling for this characterization alternative will be conducted in accordance with RCRA SW-846 methods. To ensure an adequate volume of waste material is available for sampling and to maximize the cost effectiveness of the sampling activities, some lab packed and other waste items may be bulked into larger volume containers; all RCRA waste codes will be transferred to the bulked wastes to ensure correct RCRA categorization is maintained. It may be found, when preparing a given drum for sampling, (for example, solid small volume waste items that cannot be sampled in accordance with EPA SW-846 methods) are in fact not amenable to sampling and should have been included in the item count for group 3 . If visual inspection so indicates, these waste items will be transferred to Group 3 and assigned to applicable treatability groups based on existing knowledge.

Waste items in part 3 of this treatability group which are confirmed not amenable to sampling (e.g., lead-acid batteries, spray paint cans) will be assigned to applicable treatability groups based on existing knowledge. It may be found, when inspecting a given drum, that some items can in fact be sampled in accordance with EPA SW-846 methods and should have been included in the item count for Group 2. If visual inspection so indicates, these waste items will be transferred to Group 2 and sampled accordingly.

Additional compliance dates will be proposed for any waste items in this treatability group found not to have available treatment/disposal options following a complete review of all survey, analytical, or visual inspection data obtained through these processes.

For all waste items in this treatability group, shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within (45) working days of receipt of waste at the treatment facility.

Activities for waste items in part 1 of this treatability group.

Activity	Compliance Dates
A. Complete field survey	10/30/96
B. Submit documentation declaring waste items as nonradioactive, or submit documentation assigning waste items to applicable treatability groups	2/28/97
C. Propose additional compliance dates if necessary	4/30/97

Activities for waste items in part 2 of this treatability group.

Activity	Compliance Dates
D. Complete RCRA and radiological sampling	1/28/97
E. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	2/28/97
F. Propose additional compliance dates if necessary	4/30/97

Activities for waste items in part 3 of this treatability group.

Activity	Compliance Dates
G. Complete visual verification	1/28/97
H. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	6/30/97
I. Propose additional compliance dates if necessary	9/30/97

Additional wastes:

Treatability group	MWIR waste ID	Number of items	Net volume (m^3)
Nonradioactive or suspect waste items	LA-W929-5	0	0.00
Totals		**0**	**0.00**

Activities for items added as subgroup 5 of this treatability group.

Activity	Compliance Dates
J. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	3/31/98
K. Propose additional Compliance Dates if necessary	3/31/98

3.5 Management of "Missing" Items.

Waste Category:

Category	MWIR waste ID	No. Items	Net volume (m^3)
Missing/nonexistent/TBV	None	48	8.81
Totals		**48**	**8.81**

Treatment Technology:

During visual inspections and sampling activities in support of STP waste work-off, occasionally an item cannot be found, or it is not located in the containers in which it is expected to be, according to the LANL data files for the waste item. In some instances, such items could not be verified as having ever been received in storage at LANL, and further follow-up investigations of the record files revealed that for various reasons, the waste items were never in fact generated, although on paper they were included in the original STP inventory.

In these instances, DOE and UC, and their contractors, perform a thorough inspection of both the physical inventories and the data files. When DOE and UC determine that an STP covered waste item does not exist, transfer of the item to the category called *"Missing/ nonexistent/TBV* (to be verified)", is requested through the revision process associated with the next *Annual Update.*

DOE and UC will re-verify the absence of all *"Missing/ nonexistent/TBV"* items container-by-container, as each STP waste item is being sampled, repackaged, or otherwise prepared for on- or off-site treatment. The final verification that all *"Missing/ nonexistent/TBV"* items do not in fact exist will be completed by April 21, 2004, at which time all remaining MLLW items in the original STP inventory will have been treated. At that time, DOE and UC will request deletion of all items having been fully verified as missing or nonexistent.

At any time during the re-verification process, should any of these items be discovered to exist, NMED will be notified, and approval will be requested for assignment of the rediscovered items to the appropriate TG. If necessary, they will be assigned new Activities and Compliance Dates, in accordance with the terms of the FFCO.

The following steps will be taken to verify presence or absence of this waste:

Activity	Compliance Dates
A. Initiate re-verification process on a shipment-by-shipment basis	01/03/98
B. Complete re-verification process	04/21/04
C. Re-assign any existing items to appropriate treatability groups	04/21/04
D. Complete treatment of existing wastes to applicable regulatory standards, or	10/30/04
E. Complete shipping of existing wastes to an off-site treatment facility	10/30/04
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

4.0 MIXED TRANSURANIC WASTE

Treatment Group(s):

Assorted Mixed Transuranic Waste

Treatment Technology

Respondents are required to develop treatment technologies and treat mixed transuranic (MTRU) waste at LANL according to the schedule set forth below:

Activity	Compliance Date
A. Development of treatment technologies	June 30, 1999
B. Submit permit application amendment or modification to NMED for treatment of MTRU	December 31, 1999
C. Begin treating MTRU	Six (6) months after NMED permit issuance
D. Complete treatment of existing MTRU to applicable regulatory standards	December 31, 2010

The above schedule is not based on the assumption that WIPP will be a disposal option or that DOE will receive a variance from treatment standards for land disposal of MTRU waste to be disposed at WIPP. All revisions to compliance dates shall be in accordance with the procedures set forth in the compliance order.

CPV APPENDIX A
HISTORY OF STP REVISIONS AND AMENDMENTS

As discussed in CPV Section 1.3, the STP Compliance Plan Volume has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order, as amended and revised. This Appendix provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

To date, there have been six revisions and two amendments to the CPV. In addition, the FFCO was amended once, on May 20, 1997. The following Table A-1 provides a summary of these changes. More detailed descriptions can be found in the CPV Update portion of each year's STP *Annual Update,* and the original correspondence requesting each change.

Table A-1. SUMMARY OF CHANGES TO THE CPV AND THE FFCO

Action	Document Modified	Effective Date	Effect on FFCO/STP
Rev. 1.0	STP/CPV	6/12/96	Added off-site treatment as a parallel preferred option for most MLLW treatability groups
Rev. 2.0	STP/CPV	12/9/96	Reduced volume of LA-W928 by approving reclassification of sludges as LLW
Amendment 1.0	STP/CPV	10/30/96	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Rev. 3.0	STP/CPV	1/27/97	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Amendment 1.0	FFCO	5/20/97	Modified FFCO Sections IV, V, IX, and X to streamline waste transfers and deletions
Amendment 2.0	STP/CPV	9/4/97	Extended CPV Activity 3.1.2B Compliance Date to 12/29/97
Rev. 4.0	STP/CPV	*12/29/97*	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added treatability groups, and deleted treated items
Rev. 5.0	STP/CPV	*12/29/97*	Added volumes reported in FY95 and FY96 *Annual Updates* (and certain other items) to several treatability groups, added Activities and Compliance Dates, added CPV Appendices, and deleted treated items
Rev. 6.0	STP/CPV	*(to be added)*	Added volumes reported in FY97 *Annual Update* to several treatability groups, added certain Activities and Compliance Dates, adjusted several original inventory volumes, transferred one LA-W929 item to a new treatability group, and deleted treated items

CPV APPENDIX B
SUMMARY OF CPV INVENTORY CHANGES

The following tables provide a comprehensive summary of changes to the CPV covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of this revision. The volumes given in the tables reflect changes to the individual MLLW treatability group volumes due to increases or decreases, as noted. Table B-1 reports the inventory changes arising from Revision 6.0, while Table B-2 reports the inventory changes previously approved.

Key to Reading the Subgroups

The original STP inventory in each MLLW treatability group is now denoted as subgroup -0 of that treatability group (e.g., the original volume of STP treatability group LA-W906 became LA-W906-0). The original October 4, 1995 STP inventory in each MLLW treatability group has been modified through the revision process in the FFCO. The following revisions have affected volumes in individual treatability groups to date:

Revision	Effect on Volumes
Rev. 2.0	Reduced volume of LA-W928
Rev. 3.0	Divided original volume of LA-W929 into three subgroups
Rev. 4.0	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added new treatability groups
Rev. 5.0	Increased and decreased volumes in several treatability groups
Rev. 6.0	Increased and decreased volumes in several treatability groups, transferred the volume in LA-W929-5 to another treatability group

Each revision that has added volumes to individual treatability groups has resulted in creation of an additional subgroup of that treatability group, having the same number as the revision (e.g., LA-W906-4 was created in Revision 4.0, and LA-W906-5 was created in Revision 5.0).

Additions and Deletions to Date

To date, MLLW inventory increases and decreases have been incorporated into the covered waste inventories through Revisions 2.0, 4.0, 5.0, and 6.0. Revision 2.0 incorporated decreases in treatability group LA-W928 due to deletion of covered waste items. Rev. 4.0 resulted in decreases to LA-W929 and increases in other TGs, primarily by transferring LA-W929 items to other TGs. Rev. 5.0 and 6.0 resulted in both additions to and deletions of covered waste volumes (i.e., increases and decreases) in a number of TGs. Therefore, the Appendix B tables that follow show that subgroups -4, -5, and -6 exist for some treatability groups, but not for all.

These tables provide a master list of MLLW inventory changes presented in the *Annual Updates,* to enable users of the STP to track all changes in the LANL MLLW covered waste inventory that occurred since the original STP inventory was established in the October 4, 1995 FFCO/CPV.

Changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY97. However, only those reported as of Rev. 6.0 are included in this table. All others will be reported in the next *Annual Update* and associated revision request. Therefore, the *"Net Covered Waste Inventory"* may not fully reflect the actual CPV covered waste inventory as of the date of this revision, in some instances.

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.1	IPA Wastes	LA-W901-0	7	0.02	Decrease 7	Decrease 0.02			0	0.00	0	0.00
3.1.1	Scintillation Fluids	LA-W902-0	1	0.0038	Decrease 1	Decrease 0.0038			0	0.00	0	0.00
3.1.2	Lead Blankets	LA-W903-0	0	0.00					0	0.00	0	0.00
3.1.2	Soil with Heavy Metals	LA-W904-0	58	~~10.33~~ 10.43[a]	Decrease 6	Decrease 0.62[b]			2	0.34		
					Decrease 2	Decrease 0.42[c]						
					Decrease 46	Decrease 8.91						
					Decrease 2	Decrease 0.14						
		LA-W904-5	1	0.11					1	0.11	3	0.45
3.1.2	ER Soils	LA-W905-0	0	0.00					0	0.00	0	0.00

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.3	Aqueous Organic Liquids	LA-W906-0	45	1.65					45	1.65		
		LA-W906-4	27	0.36					27	0.36		
		LA-W906-5	101	~~8.88~~ 8.31[d]					101	8.31		
		LA-W906-6	0	0.00	Increase 88	Increase 5.74			88	5.74	261	16.06
3.1.4	Organic-Contaminated Combustible Solids	LA-W911-0	305	28.10	Increase 2	Increase 0.42[c]			307	28.52		
		LA-W911-4	33	0.68					33	0.68		
		LA-W911-5	40	6.87					40	6.87		
		LA-W911-6	0	0.00	Increase 1	Increase 0.0038			1	0.0038	381	36.07
3.1.4	Organic-Contaminated Noncombus-tible Solids	LA-W919-0	79	7.71	Increase 1	Increase 0.11[e]			80	7.82		
		LA-W919-4	9	0.38					9	0.38		
		LA-W919-5	89	10.53					89	10.53		
		LA-W919-6	0	0.00	Increase 49	Increase 8.58			49	8.58	227	27.31

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.5	Combustible Debris	LA-W912-0	83	13.82					83	13.82		
		LA-W912-4	9	0.75					9	0.75		
		LA-W912-5	5	0.28					5	0.28		
		LA-W912-6	0	0.00	Increase 6	Increase 0.32			6	0.32	103	15.17
3.1.5	Activated or Inseparable Lead	LA-W921-0	14	4.77	Decrease 1 Decrease 2	Decrease 0.06[f] Decrease 1.72			11	2.99		
		LA-W921-5	18	3.35	Decrease 4	Decrease 0.83[f]			14	2.52		
		LA-W921-6	0	0.00	Increase 9	Increase 1.58			9	1.58	34	7.09
3.15	Non-combustible Debris	LA-W922-0	41	5.62	Decrease 14	Decrease 2.915			27	2.71		
		LA-W922-4	53	2.83					53	2.83		
		LA-W922-5	63	22.29	Decrease 3	Decrease 0.62			60	21.67		
		LA-W922-6	0	0.00	Increase 51	Increase 9.25			51	9.25	191	36.46

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.6	Aqueous Wastes with Heavy Metals	LA-W913-0	83	1.50					83	1.50		
		LA-W913-4	25	0.40					25	0.40		
		LA-W913-5	11	0.15					11	0.15		
		LA-W913-6	0	0.00	Increase 20	Increase 1.02			20	1.02	139	3.07
3.1.6	Corrosive Solutions	LA-W914-0	60	0.69					60	0.69		
		LA-W914-4	90	0.36					90	0.36		
		LA-W914-5	39	0.12					39	0.12		
		LA-W914-6	0	0.00	Increase 8	Increase 0.04			8	0.04	197	1.21
3.1.6	Aqueous Cyanides, Nitrates, Chromates, and Arsenates	LA-W915-0	9	0.13					9	0.13		
		LA-W915-4	3	0.002					3	0.002		
		LA-W915-5	11	0.04					11	0.04	23	0.17
3.1.7	Water-Reactive Wastes	LA-W916-0	78	6.03					78	6.03		
		LA-W916-4	26	0.31					26	0.31		
		LA-W916-5	4	0.03					4	0.03		
		LA-W916-6	0	0.00	Increase 5	Increase 0.68			5	0.68	113	7.05
3.1.8	Compressed Gases Requiring Scrubbing	LA-W917-0	13	0.35					13	0.35	13	0.35

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.9	Compressed Gases Requiring Oxidation	LA-W918-0	6	0.08					6	0.08		
		LA-W918-4	168	1.23					168	1.23		
		LA-W918-5	2	0.01					2	0.01		
		LA-W918-6	0	0.00	Increase 1	Increase 0.0002			1	0.0002	177	1.32
3.1.10	Elemental Mercury	LA-W920-0	45	0.50					45	0.50		
		LA-W920-4	20	0.02					20	0.02		
		LA-W920-5	9	0.02					9	0.02		
		LA-W920-6	0	0.00	Increase 5	Increase 0.12			5	0.12	79	0.66
3.2.1	Halogenated Organic Liquids	LA-W907-0	384	16.58	Decrease 3	Decrease 0.0076			381	16.57		
		LA-W907-4	97	1.05					97	1.05		
		LA-W907-5	31	0.49					31	0.49		
		LA-W907-6	0	0.00	Increase 16	Increase 0.15			16	0.15	525	18.26

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Nonhalogen-ated Organic Liquids	LA-W908-0	275	14.34	Increase 0[g] Decrease 4 Decrease 0[h]	Increase 0.076 Decrease 0.49 Decrease 0.11			271	13.82		
		LA-W908-4	409	3.38					409	3.38		
		LA-W908-5	130	2.91					130	2.91		
		LA-W908-6	0	0.00	Increase 33	Increase 0.09			33	0.09	843	20.20
3.2.1	Bulk Oils	LA-W909-0	28	3.75	Increase 0[i] Decrease 23	Increase 0.47 Decrease 2.22			5	2.00		
		LA-W909-4	8	1.48					8	1.48		
		LA-W909-5	28	2.28					28	2.28		
		LA-W909-6	0	0.00	Increase 4	Increase 0.05			4	0.05	45	5.81
3.2.1	PCB Wastes with RCRA Components	LA-W910-0	4	0.74	Increase 6	Increase 0.62[b]			10	1.36		
		LA-W910-6	0	0.00	Increase 30	Increase 1.39			30	1.39	40	2.75

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Liquid and Solid Oxidizers	LA-W923-0	6	0.117					6	0.117		
		LA-W923-4	67	0.145					67	0.145		
		LA-W923-5	13	0.317					13	0.317		
		LA-W923-6	0	0.00	Increase 7	Increase 0.795			7	0.795	93	1.37
3.3	Lead Waste - TBD	LA-W924-0	129	40.16					129	40.16	129	40.16
3.3	Mercury Wastes - TBD	LA-W925-0	63	18.30					63	18.30		
		LA-W925-4	37	0.42					37	0.42		
		LA-W925-5	14	1.52					14	1.52		
		LA-W925-6	0	0.00	Increase 23	Increase 0.67			23	0.67	137	20.91
3.3	Compressed Gases - TBD	LA-W926-0	10	1.25					10	1.25	10	1.25
3.3	Biochemical Laboratory Wastes	LA-W927-0	9	1.34					9	1.34	9	1.34
3.3	Dewatered Treatment Sludge	LA-W928-0	61	12.71					61	12.71	61	12.71
3.3	Explosives	LA-W932-0	0	0.00					0	0.00		
		LA-W932-4	1	0.000001					1	0.000001	1	0.000001

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Lab Packs	LA-W933-0	0	0.00					0	0.00		
		LA-W933-4	114	0.17					114	0.17		
		LA-W933-5	28	0.13					28	0.13		
		LA-W933-6	0	0.00	Increase 6	Increase 0.003	Increase 1	Increase 0.00002[j]	7	0.003	149	0.30
3.4.1	Lead for Surface Decontamin-ation	LA-W930-0	36	33.43	Decrease 1 Decrease 4 Decrease 6 Decrease 2	Decrease 0.11[k] Decrease 0.35[k] Decrease 1.04 Decrease 5.66			23	26.27		
		LA-W930-5	115	23.75	Decrease 1 Decrease 3	Decrease 0.21[k] Decrease 0.62[k]			111	22.92		
		LA-W930-6	0	0.00	Increase 14	Increase 12.06			14	12.06	148	61.25

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.4.2	Nonradioactive or Suspect Waste Items to be Surveyed	LA-W929-0	2	0.0076	Decrease 2	Decrease 0.0076			0	0.00		
		LA-W929-5	1	0.00002			Decrease 1	Decrease 0.00002[j]	0	0.00	0	0.00
None[l]	Lead Requiring Sorting	LA-W931-0	23	4.76	Decrease 23 Increase 0[m]	Decrease 4.78 Increase 0.02			0	0.00		
		LA-W931-5	8	0.44					8	0.44		
		LA-W931-6	0	0.00	Increase 4	Increase 0.64			4	0.64	12	1.08
None[n]	IPA	None	0	0.00	Increase 1 Decrease 1	Increase 0.0005[n] Decrease 0.0005[n]			0	0.00	0	0.00

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Category	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)			Items	Volume (m^3)	Items	Volume (m^3)
3.5	Missing/ nonexistent/ TBV	NONE (Revision 5)	48	8.81					48	8.81	48	8.81

NOTES:

[a] This correction in LA-W904 volume arises from an error in the Appendix B in Revision 4/5 as discussed in Revision 6.0.
[b] This transfer of LA-W904 waste to LA-W910 was approved by NMED on September 18, 1997 as discussed in Revision 6.0
[c] This transfer of LA-W904 waste to LA-W911 was approved by NMED on September 18, 1997 as discussed in Revision 6.0
[d] This correction in LA-W906 volume arises from an error in the Appendix B in Revision 4/5 as discussed in Revision 6.0.
[e] The volume increase arises from the return of unused treatability study sample. It has been returned to the original inventory of LA-W919 (subgroup -0) consistent with the inventory subgroup from which the sample was removed.
[f] These 5 items in subgroups LA-W921-0 and -5 (0.89 m^3 total) were shipped on December 9, 1996 as discussed in DOE's letter dated December 24, 1996.
[g] This increase in LA-W908 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[h] This decrease in LA-W908 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[I] This correction in LA-W909 volume arises from an error in Appendix B in Revision 4/5 as discussed in Revision 6.0.
[j] This transfer of LA-W929 waste to LA-W933 is discussed in Revision 6.0.
[k] The shipment of 0.32 m^3, as reported in the FY97 STP *Annual Update*, consisted of 1 item (0.11 m^3) from subgroup LA-W930-0 and 1 item (0.21 m^3) from subgroup -5. The shipment of 0.97 m^3, as reported in the FY97 STP *Annual Update*, consisted of 4 items (0.35 m^3) from subgroup -0 and 3 items (0.62 m^3) from subgroup -5.
[l] This treatability group (LA-W931, *Lead Requiring Sorting*) is not listed in the CPV; however it is discussed in section 3.4.3 of the *Background Volume*.
[m] This increase in LA-W931 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[n] This item of isopropyl alcohol waste was not included in the original STP inventory and it was shipped for treatment as discussed in DOE's letter dated January 9, 1997.

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.1	IPA Wastes	LA-W901-0	104	15.89							Decrease 96	Decrease 15.87	Decrease 1	Decrease 0.0005[b]	7	0.02		
		LA-W901-5									Increase 0 Decrease 0	Increase 4.11[c] Decrease 4.11			0	0.00	7	0.02
3.1.1	Scintillation Fluids	LA-W902-0	18	2.47					Decrease 15	Decrease 2.24	Decrease 2	Decrease 0.36			1	0.0038		
		LA-W902-5									Increase 0 Decrease 0	Increase 0.13[c] Decrease 0.13			0	0.00	1	0.0038
3.1.2	Lead Blankets	LA-W903-0	4	0.74							Decrease 4	Decrease 0.74			0	0.00	0	0.00
3.1.2	Soil with Heavy Metals	LA-W904-0	59	10.53									Decrease 1	Decrease ~~0.2082~~ 0.1047[d,1] *(see Rev 6.0 for correction)*	58	~~10.33~~ 10.43		
		LA-W904-5									Increase 1	Increase 0.11			1	0.11	59	10.54 ~~10.44~~
3.1.2	ER Soils	LA-W905-0	36	39.32							Decrease 36	Decrease 39.32			0	0.00	0	0.00

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.3	Aqueous Organic Liquids	LA-W906-0	45	1.65											45	1.65		
		LA-W906-4					Increase 27	Increase 0.36							27	0.36		
		LA-W906-5							Increase 3	Increase 0.43	Increase 73	Increase 3.62	Increase 1 Increase 24	Increase 0.0005[b] Increase ~~4.83~~ 4.26[c,1] *(see Rev 6.0 for correction)*	101	~~8.88~~ 8.31	173	10.32 ~~10.89~~
3.1.4	Organic-Contaminated Combustible Solids	LA-W911-0	307	28.32					Decrease 1	Decrease 0.11	Decrease 1	Decrease 0.11			305	28.10		
		LA-W911-4					Increase 33	Increase 0.68							33	0.68		
		LA-W911-5							Increase 2	Increase 0.17	Increase 31	Increase 5.24	Increase 7	Increase 1.46[e]	40	6.87	378	35.65

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.4	Organic-Contaminated Noncombustible Solids	LA-W919-0	80	7.82					Decrease 1	Decrease 0.11					79	7.71		
		LA-W919-4					Increase 9	Increase 0.38							9	0.38		
		LA-W919-5							Increase 9	Increase 0.001	Increase 74	Increase 9.58	Increase 6	Increase 0.95[e]	89	10.53	177	18.62
3.1.5	Combustible Debris	LA-W912-0	83	13.82											83	13.82		
		LA-W912-4					Increase 9	Increase 0.75							9	0.75		
		LA-W912-5									Increase 5	Increase 0.28			5	0.28	97	14.85
3.1.5	Activated or Inseparable Lead	LA-W921-0	74	15.60					Decrease 37	Decrease 7.42	Decrease 23	Decrease 3.41			14	4.77		
		LA-W21-5							Increase 51	Increase 10.11	Decrease 45 Increase 12	Decrease 9.05 Increase 2.29			18	3.35	32	8.12

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.5	Non-combustible Debris	LA-W922-0	41	5.62					~~Decrease~~ ~~1~~	~~Decrease~~ ~~.0002~~[b]					41	5.62		
		LA-W922-4					Increase 53	Increase 2.83							53	2.83		
		LA-W922-5							Increase 21	Increase 1.25	Increase 42	Increase 21.04			63	22.29	157	30.74
3.1.6	Aqueous Wastes with Heavy Metals	LA-W913-0	203	1.85							Decrease 12 Decrease 108	Decrease 0.030 Decrease 0.32			83	1.50		
		LA-W913-4					Increase 25	Increase 0.40							25	0.40		
		LA-W913-5									Increase 11	Increase 0.15			11	0.15	119	2.05
3.1.6	Corrosive Solutions	LA-W914-0	162	1.36							Decrease 102	Decrease 0.67			60	0.69		
		LA-W914-4					Increase 90	Increase 0.36							90	0.36		
		LA-W914-5							Increase 13	Increase 0.04	Increase 26	Increase 0.08			39	0.12	189	1.17

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.6	Aqueous Cyanides, Nitrates, Chromates, and Arsenates	LA-W915-0	15	0.13					Decrease 1	Decrease 0.0003	Decrease 1 Decrease 4	Decrease 0.0002 Decrease 0.0031			9	0.13		
		LA-W915-4					Increase 3	Increase 0.002							3	0.002		
		LA-W915-5							Increase 4	Increase 0.02	Increase 7	Increase 0.02			11	0.04	23	0.17
3.1.7	Water-Reactive Wastes	LA-W916-0	78	6.03											78	6.03		
		LA-W916-4					Increase 26	Increase 0.31							26	0.31		
		LA-W916-5							Increase 1	Increase 0.02	Increase 3	Increase 0.01			4	0.03	108	6.37
3.1.8	Compressed Gases Requiring Scrubbing	LA-W917-0	13	0.35											13	0.35	13	0.35
3.1.9	Compressed Gases Requiring Oxidation	LA-W918-0	6	0.08											6	0.08		
		LA-W918-4					Increase 168	Increase 1.23							168	1.23		
		LA-W918-5									Increase 2	Increase 0.01			2	0.01	176	1.32

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.10	Elemental Mercury	LA-W920-0	45	0.50											45	0.50		
		LA-W920-4					Increase 20	Increase 0.02							20	0.02		
		LA-W920-5									Increase 9	Increase 0.02			9	0.02	74	0.54
3.2.1	Halogenated Organic Liquids	LA-W907-0	385	16.58							Decrease 1	Decrease 0.0025			384	16.58		
		LA-W907-4					Increase 97	Increase 1.05							97	1.05		
		LA-W907-5							Increase 13	Increase 0.04	Increase 18	Increase 0.45			31	0.49	512	18.12
3.2.1	Nonhalogenated Organic Liquids	LA-W908-0	275	14.34											275	14.34		
		LA-W908-4					Increase 409	Increase 3.38							409	3.38		
		LA-W908-5							Increase 53	Increase 0.08	Increase 77	Increase 2.83			130	2.91	814	20.63

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Bulk Oils	LA-W909-0	28	3.75											28	3.75		
		LA-W909-4					Increase 8	Increase 1.48							8	1.48		
		LA-W909-5									Increase 28	Increase 2.28			28	2.28	64	7.51
3.2.1	PCB Wastes with RCRA Components	LA-W910-0	4	0.74											4	0.74	4	0.74
3.2.1	Liquid and Solid Oxidizers	LA-W923-0	55	0.20							Decrease 49	Decrease 0.0834			6	0.117		
		LA-W923-4					Increase 67	Increase 0.145							67	0.145		
		LA-W923-5							Increase 24	Increase 0.32	Decrease 11	Decrease 0.0034			13	0.317	86	0.58
3.3	Lead Waste - TBD	LA-W924-0	186	51.44					Decrease 57	Decrease 11.28					129	40.16	129	40.16
3.3	Mercury Wastes - TBD	LA-W925-0	63	18.30											63	18.30		
		LA-W925-4					Increase 37	Increase 0.42							37	0.42		
		LA-W925-5									Increase 14	Increase 1.52			14	1.52	114	20.24
3.3	Compressed Gases - TBD	LA-W926-0	10	1.25											10	1.25	10	1.25

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Biochemical Laboratory Wastes	LA-W927-0	9	1.34											9	1.34	9	1.34
3.3	Dewatered Treatment Sludge	LA-W928-0	1288	268.17	Decrease 1227	Decrease 255.46									61	12.71	61	12.71
3.4.1	Lead for Surface Decontamination	LA-W930-0	125	56.20					Decrease 83	Decrease 14.43[f]			Decrease 6	Decrease 8.34[d]	36	33.43		
		LA-W930-5							Increase 109	Increase 22.50	Increase 6	Increase 1.25			115	23.75	151	57.18
3.4.2	Nonradioactive or Suspect Waste Items to be Surveyed	LA-W929-0	1250	14.24			Decrease 1196 Decrease 41	Decrease 13.97 Decrease 0.26[d]	~~Decrease 4~~	~~Decrease 0.002~~[h]	Decrease 2 Decrease 9	Decrease 0.00094 Decrease 0.0029			2	0.0076[g]		
		LA-W929-5							Increase 1	Increase .00002					1	0.00002	3	0.0076[g]
None	Lead Requiring Sorting	LA-W931-0	48	9.97					Decrease 22	Decrease 4.58	Decrease 3	Decrease 0.63			23	4.76		
		LA-W931-5							Increase 28	Increase 5.73	Decrease 28 Increase 8	Decrease 5.73 Increase 0.44			8	0.44	31	5.20

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Explosives	LA-W932-0	0	0.00											0	0.00		
		LA-W932-4					Increase 1	Increase 0.000001							1	0.000001	1	0.000001
3.3	Lab Packs	LA-W933-0	0	0.00											0	0.00		
		LA-W933-4					Increase 114	Increase 0.17							114	0.17		
		LA-W933-5									Increase 28	Increase 0.13			28	0.13	142	0.30

CPV Section	Category	MWIR ID (by substream)	October, 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.5	Missing/ non-existent/ TBV	NONE											Increase 1 Increase 41 Increase 6	Increase 0.2082[d] Increase 0.26[d] Increase 8.34[d]			48	8.81

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

NOTES:

[a] Changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY96; however, only those reported as Rev. 5.0 *"Other Changes"* are included in this table. All others will be reported in the March, 1998 FY97 *Annual Update* and associated revision request. Therefore, the *"Net Covered Waste Inventory"* may not fully reflect the ACTUAL CPV covered waste inventory as of the date of this revision, in some instances.

[b] As reported in DOE's January 31, 1997 letter, the volume associated with the 104th LA-W901-0 item (0.0005 m^3) was repackaged, and bulked with other LA-W906 wastes in 1991, prior to issuance of the original STP. Since this *"missing"* item has now been located, its volume is being formally transferred to LA-W906 and will be managed as such.

[c] The 4.11 m^3 volume shown for LA-W901, and the 0.13m^3 volume shown for LA-W902 are corrections, to reflect the actual volumes shipped in FY96. As reported in the March, 1997 FY96 *Annual Update*, the volume changes for LA-W901 and LA-W902 in FY96 were based on current data in LANL's waste database. They are consistent with the original documentation submitted by the waste generator, and they are representative of actual volumes of these wastes when shipped for treatment. The volumes used during the preparation of the original STP were erroneous, thereby resulting in more waste being shipped than reported in the original STP inventory. This volume inconsistency was discussed in DOE's January 31, 1997 letter.

[d] These items from LA-W904, LA-W929, and LA-W930 have been determined to be missing or nonexistent. They are being transferred to the category *"Missing/Nonexistent/TBV"* until their presence or absence are fully and finally verified.

[e] Although a number of changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY96, only those reported here as Rev. 5.0 *"Other Changes"* are included in this table. These represent additional waste items that became covered waste after the end of FY96, for which opportunities exist for treatment during FY98. All other covered waste inventory changes since the end of FY96 will be reported in the March, 1998 FY97 *Annual Update.*

[f] This represents a correction to the March, 1996 FY95 *Annual Update* for LA-W930, which had reported that 84 items (14.64 m^3) had been 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.

[g] Two items in the original STP inventory for LA-W929, *Sort, Survey, and Decontamination*, were shipped to DSSI for treatment on December 18, 1996. This change in the covered waste volume will be reflected in the March,1998 FY97 *Annual Update,* and will be deleted from the CPV inventory in the associated revision. Therefore, these two items were reported as treated in the various submittals associated with Revision 4 of the STP, but were reported in the March, 1997 FY96 *Annual Update* (and are shown here) as having been in inventory as of September 30, 1996.

[h] This represents a correction to the March, 1996 FY95 *Annual Update*. It was reported that one LA-W922 item (0.0002 m^3) and 4 LA-W929 items (0.002 m^3) had been removed from inventory. This was incorrect because these items had been repacked into different containers, and are still in inventory.

[i] For LA-W906, Rev. 5.0 (Other Changes), the correct volume associated with this increase is 4.26 m^3 for LA-W904, Rev. 5.0 (Other Changes), the correct decrease is 0.105 m^3. Both of these corrrections are discussed and implemented in Rev 6.0.

old one

EXHIBIT A

LOS ALAMOS NATIONAL LABORATORY

MIXED WASTE SITE TREATMENT PLAN

COMPLIANCE PLAN VOLUME (CPV)

BACKGROUND VOLUME

1.0 PURPOSE AND SCOPE OF THE COMPLIANCE PLAN VOLUME

1.1 Introduction

On October 6, 1992, Congress passed the Federal Facility Compliance Act (FFC Act) to address compliance by the United States Department of Energy (DOE) with the land disposal restrictions (LDR) for the storage of mixed waste set forth in Section 3004(j) of RCRA. The FFC Act requires the DOE to submit a Site Treatment Plan (STP) for developing treatment capacities and technologies to treat all of the facility's mixed waste, regardless of the time generated, to the standards promulgated pursuant to Section 3004(m) of RCRA. The FFC Act provides that the appropriate regulatory authority, the New Mexico Environment Department (NMED), may approve, approve with modifications or disapprove the STP. Prior to making such a determination, NMED is required by FFC Act to provide public notice, consider public comments, consult with the Environmental Protection Agency (EPA) and any other state in which a facility affected by the STP is located.

On March 31, 1995, DOE submitted its proposed STP to NMED for the treatment of mixed waste at the Los Alamos National Laboratory (LANL). On April 17, 1995, the public was given notice of and an opportunity to comment to NMED on the draft STP submitted by DOE. After considering public comment and otherwise complying with the FFC Act, NMED determined to approve the draft STP with modifications as provided in this document.

The STP is intended to fulfill the requirements of the FFC Act and establish an enforceable framework to allow DOE and the Regents of the University of California (Respondents) to achieve full compliance with LDR requirements under the New Mexico Hazardous Waste Act (HWA) and RCRA. The compliance dates set forth herein are enforceable time periods in which Respondents are required to develop treatment capacities and technologies, and treat or otherwise meet the requirements set forth for LDR under the HWA and RCRA. The STP will be fully implemented by a Compliance Order issued by NMED on or before October 6, 1995.

1.2 Contents

The STP contains two volumes and is intended to bring Respondents into compliance with LDR storage prohibitions under the HWA and RCRA. The Compliance Plan Volume of the STP provides overall schedules, including compliance dates, for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The Compliance Plan includes a schedule for the submittal of applications for permits, construction of treatment facilities, technology development, off-site transportation for treatment, and the treatment of mixed wastes in full compliance with the HWA and the implementing regulations at 20 NMAC 4.1, which incorporates by reference 40 CFR Parts 260 through 270. The Background

Volume of the STP contains progress reports as required in the Compliance Order. Respondents shall carry out the activities described in the STP, including the Compliance Plan Volume of the STP, in accordance with the schedules and requirements set forth in the STP and the Order.

2.0 Compliance Schedules

The STP provides overall schedules for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The schedules include those activities required to bring existing waste treatment technologies into operation, process backlogged and currently generated waste, include schedules required to develop new facilities and capacity for treatment and establish an overall time frame for achieving compliance with the LDR requirements under the HWA and 20 NMAC 4.1.

2.1 Categories of Activities for Compliance Dates

The categories of activities for which compliance dates will be provided for different types of treatment approaches in the STP are listed in the tables below. The categories of activities are based on Section 3021(b)(1)(B)(I), (ii), and (iii) of the RCRA, to the extent appropriate.

2.1.1 Plans Where Treatment Technology Exists

For most of the mixed waste, treatment technologies have been identified and developed. For the waste that will be treated on-site, the categories of activities for compliance dates identified in Table I shall apply. Compliance dates for the activities identified in Table I may be found in Section 3.1.

Table I. Categories of Activities for Compliance for Mixed Waste with Existing Treatment Technologies.

A.	Submit permit applications to the NMED.
B.	Initiate construction as specified in the NMED permit.
C.	Complete system testing and commence operation.
D.	Begin treating mixed waste.
E.	Complete treatment of existing wastes to applicable regulatory standards.

2.1.2 Plans Where Technology Must Be Developed

For some mixed waste, no treatment technologies have been identified and developed, or the treatment technology must be modified or adapted to apply to such waste. For the waste that will be treated on-site, the categories of activities for compliance dates are identified in Table II and shall apply. Compliance dates for the activities identified in Table II may be found in Section 3.2.

Table II. Categories of Activities for Compliance Dates for Mixed Waste Without Existing Treatment Technologies.

A. Identify and develop technology.
B. Submit permit application to NMED; or
C. Submit a Notification of Intent to perform treatability study to NMED a minimum of 45 days prior to commencement of the study.
D. Initiate construction as specified in the NMED.
E. Commence systems testing.
F. Begin treating mixed waste.
G. Complete treatment of existing wastes to applicable regulatory standards.

2.1.3 Requirements Pertaining to Radionuclide Separation

The FFC Act sets additional requirements in cases in which DOE intends to conduct radionuclide separation of mixed waste. Should the DOE determine to do radionuclide separation of such mixed waste, DOE will schedule specific compliance dates based on category activities identified in Table III. "Radionuclide separation" shall mean segregating the radioactive portion of the mixed waste from the hazardous portion of the mixed waste.

Table III. Categories of Activities for Compliance Dates for Radionuclide Separation of Mixed Waste

A.	Complete an estimate of the volume of waste generated by each case of radionuclide separation.
B.	Complete an estimate of the volume of waste that would exist or be generated without radionuclide separation.
C.	Complete an estimate of the costs of waste treatment and disposal if radionuclide separation is used compared with the estimated costs if it is not used.
D.	Provide the assumptions underlying such estimates of waste volumes and cost estimates.
E.	Provide characterization methodologies for determining waste type.
F.	Submit a plan for treating or managing hazardous waste residues, accompanied by a NMED permit application.

2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment

Should DOE decide to treat waste at an off-site facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. DOE shall request approval from NMED for off-site treatment in accordance with the revision process pursuant to the Compliance Order.

Table IV. Activities for Mixed Waste to be Shipped Off-Site for Treatment

A.	Request necessary approval from NMED for shipment of waste
B.	Meet all regulatory requirements for off-site shipment
C.	Provide documentation to NMED that waste has been received at an off-site facility for treatment, disposal or storage pending treatment or disposal.

2.1.5 Plans Related to Other Mixed Waste Activities

1. Activities other than the types of activities specifically called for in the FFC Act as requiring schedules are described in this STP. Some of these activities may be associated with schedules which may contain compliance dates related to treatment of the DOE's mixed waste.

2. For mixed waste which is not sufficiently characterized to allow identification of appropriate treatment, notification of the characterization of such waste shall be in accordance with the annual update process described in the Compliance Order. If such characterization results in the addition or deletion of a treatability group or an increase in volume in a treatability group, a revision would be required pursuant to Section X of the Compliance Order.

3.0 LOW-LEVEL MIXED WASTE STREAMS

This section presents proposed schedules for treatment technologies and the preferred options to treat low-level mixed waste streams (LLMW) at LANL. All preferred options not described below must be approved by NMED in accordance with the revision process pursuant to the Compliance Order.

3.1 Mixed Waste Streams for Which Technology Exists

The following subsections summarize LLMW treatability groups for which technology exists.

3.1.1 Commercial Off-site Treatment by Thermal Treatment

Treatability Group(s):

LLMW for Commercial Thermal Treatment (MWIR Treatment ID DS-S001)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
IPA wastes	LA-W901	D001, D009, F002, F003, F005	104	15.89
scintillation fluids	LA-W902	D001, F003, F005	18	2.47
Totals			122	18.36

Treatment Technology:

The waste will be treated at an off-site commercial facility that combusts organic liquid waste.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	9/30/96
B. Complete shipping waste	12/30/96
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.2 Commercial Off-site Treatment by Stabilization or Macroencapsulation

Treatability Group(s):

LLMW for Commercial Stabilization

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (M^3)
lead blankets	LA-W903	D007, D008	4	0.74
soil with heavy metals	LA-W904	D004, D005, D006, D007, D008, D009, D010, D011	59	10.53
ER soils	LA-W905	D028, D029, F001, F005 D010, D011	36	39.32
Totals			99	50.59

Treatment Technology:

The waste will be treated at an off-site commercial facility that stabilizes or macroencapsulates wastes.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	05/30/97
B. Complete shipping waste	09/30/97
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.3 Evaporative Oxidation (MWIR Treatment ID GJ-S801C)

Treatability Group(s):

LLMW for Evaporative Oxidation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906	D001, D002, D005, D007, D008, D010, D018, D019, D022, D027, D028, D030, D032, D033, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	45	1.65
Totals			45	1.65

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. DOE shall request approval from NMED for off-site treatment in accordance with the revision process pursuant to the Compliance Order.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	12/30/96
B. Initiate construction	As specified in the NMED permit.
C. Complete system test and commence operation and begin treating mixed waste	6/19/99
D. Complete treatment of existing wastes to applicable regulatory standards	2/09/00

3.1.4 Thermal Desorption (MWIR Treatment ID GJ-S801B)

LLMW for Thermal Desorption/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m3)
organic-contaminated combustible solids	LA-W911	D001, F001, F002, F003, F005	307	28.32
Totals			307	28.32

LLMW for Thermal Desorption

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m3)
organic-contaminated noncombustible solids	LA-W919	D001, D003, D004, D005, D006, D007, D008, D009, D010, D011, D027, D030, D032, D033, D034, D042, D043, F001, F002, F004, F005	80	7.82
Totals			80	7.82

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Should DOE decide to treat waste at an off-site facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. DOE shall request approval from NMED for off-site treatment in accordance with the revision process pursuant to the Compliance Order.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	11/16/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	02/01/01
D. Complete treatment of existing wastes to applicable regulatory standards	02/14/02

3.1.5 Macroencapsulation (MWIR Treatment ID PX-S803)

Treatability Group(s):

LLMW for Macroencapsulation/Off-site treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m3)
combustible debris	LA-W912	D001, D002, D003, D005, D006, D007, D008, D009, D011, D035, F001, F002, F003, F005	83	13.82
Totals			83	13.82

LLMW for Macroencapsulation

Treatability group		RCRA codes	Number of items	Net volume (m3)
activated or inseparable lead	LA-W921	D008	74	15.60
noncombustible debris	LA-W922	D001, D004, D005, D006, D007, D008, D009, D010, D011	41	5.62
Totals			115	21.22

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Should DOE decide to treat waste at an off-site facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. DOE shall request approval from NMED for

off-site treatment in accordance with the revision process pursuant to the Compliance Order.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/04/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operation and begin treating mixed waste	02/01/00
D. Complete treatment of existing wastes to applicable regulatory standards	08/25/00

3.1.6 Chemical Plating Waste Treatment Skid (MWIR Treatment ID LA-S004)

Treatability Group(s):

LLMW for Chemical Plating Waste Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m3)
aqueous wastes with heavy metals	LA-W913	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011	203	1.85
corrosive solutions	LA-W914	D001, D002	162	1.36
aqueous cyanides, nitrates, chromates, and arsenates	LA-W915	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, F007, P029, P098	15	0.13
Totals			380	3.34

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Should DOE decide to treat waste at an off-site facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. DOE shall request approval from NMED for off-site treatment in accordance with the revision process pursuant to the Compliance Order.

Activity	Compliance Dates
A. Resubmit revised permit application to NMED	10/30/96
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	03/17/00
D. Complete treatment of existing wastes to applicable regulatory standards	05/08/01

3.1.7 Water-reactive Metals Treatment Skid (MWIR Treatment ID LA-S003)

Treatability Group(s):

LLMW for Water-Reactive Metals Skid

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m3)
water-reactive wastes	LA-W916	D001, D003	78	6.03
Totals			78	6.03

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	06/30/01
B. Initiate construction	As specified in the NMEDpermit
C. Complete system testing and commence operations and begin treating mixed waste	09/09/03
D. Complete treatment of existing wastes to applicable regulatory standards	04/21/04

3.1.8 Gas-scrubbing Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas-Scrubbing Skid

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m3)
compressed gases requiring scrubbing	LA-W917	D001, D002, P056	13	0.35
Totals			13	0.35

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards	08/28/03

3.1.9 Gas Oxidation Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas Oxidation Skid

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m3)
compressed gases requiring oxidation	LA-W918	D001	6	0.08
Totals			6	0.08

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards	08/28/03

3.1.10 Mercury Amalgamation (MWIR Treatment ID PI-S801)

Treatability Group(s):

LLMW for Amalgamation

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m3)
elemental mercury	LA-W920	D006, D009, F005	45	0.50
Totals			45	0.50

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/30/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	06/05/00
D. Complete treatment of existing waste to applicable regulatory standards	11/15/00

3.2 Mixed Waste Streams for Which Technology Requires Adaptation or for Which No Technology Exists

The following subsections summarize mixed waste streams for which technology requires adaptation or for which no technology exists.

3.2.1 Hydrothermal Processing

Treatability Group(s):

LLMW for Hydrothermal Processing/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m3)
halogenated organic liquids	LA-W907	D001, D002, D003, D007, D009, D018, D019, D022, D028, D029, D035, D043, F001, F002, F003, F005, U077, U080, U226, U227, U228, U236	385	16.58
nonhalogenated organic liquids	LA-W908	D001, D002, D003, D004, D007, D008, D009, D011, D018, D038, D040, F002, F003, F004, F005, U002, U019, U169, U188, U220, U246	275	14.34
bulk oils	LA-W909	D002, D004, D005, D006, D007, D008, D009, D010, D011, D021, D027, D039, F001, F002, F003, F005	28	3.75
PCB wastes with RCRA components	LA-W910	D008, D039, F002	4	0.74
Totals			692	35.41

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m3)
inorganic solid oxidizers	LA-W923	D001, D003, D005	55	0.20
Totals			55	0.20

Treatment Technology:

The preferred destruction treatment technology option for this treatability group is Hydrothermal Processing which is a technology that needs development for adaptation to treat radioactive and PCB-bearing waste. This treatment technlogy is being adapted at LANL and is expected to be developed into a mobile treatment unit. The GJPO schedule for deployment of the unit indicates its possible availability to LANL after February 2002. Respondents shall submit treatment schedules and options as a revision for NMED's approval by November 30, 1998.

3.3 Mixed Waste Requiring Further Characterization or for Which Technology Assessment Has Not Been Done (MWIR Treatment ID LA-S701)

Treatability Group(s):

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m3)
lead wastes - TBD	LA-W924	D003, D008	186	51.44
mercury wastes - TBD	LA-W925	D007, D008, D009, F001	63	18.30
compressed gases - TBD	LA-W926	D001, D007, D009, D022, P056, U080, U226	10	1.25
biochemical laboratory wastes	LA-W927	D001, D003	9	1.34
dewatered treatment sludge	LA-W928	see Subsection 3.3 in the Background Volume	1288	268.17
Totals			1556	340.50

Treatment Technology:

The following steps will be taken to properly characterize this waste:

- Conduct additional generator interviews
- Prepare a sampling plan for waste not adequately characterized
- Conduct sampling and analysis
- Determine treatment options

Activity	Compliance Dates
A. Complete generator interviews	10/30/95
B. Complete sampling and analysis plan	1/30/96
C. Complete sampling and analysis	9/30/98
D. Complete determination of treatment options	12/20/98

3.4 Plans for Other Types of Activities

The following subsection summarizes plans for other types of activities.

3.4.1 Lead Decontamination (MWIR Treatment ID LA-S001)

Treatability Group(s):

Treatability group	MWIR waste ID	Net volume (m3)	Preferred option
lead for surface contamination	LA-W930	56.20	lead decontamination trailer
Totals		56.20	

Treatment Technology:

Lead bricks and shapes will be decontaminated for recycle in an on-site decontamination trailer. The trailer is on-site and has operated, but needs an upgrade for prolonged operation.

Activity	Compliance Date
complete lead decontamination	09/30/97

Lead shapes and forms not amenable to processing using the decontamination trailer.

Activity	Compliance Date
provide schedule for development of lead processing techniques and options	06/30/96

3.4.2 Sorting, Surveying, and Decontamination (MWIR Treatment ID GJ-S804)

Treatability Group(s):

Treatability group	MWIR waste ID	Number of items	Net volume (m3)
nonradioactive or suspect waste items to be surveyed	LA-W929	1250	14.24
Totals		1250	14.24

Treatment Technology:

This field operation will survey waste suspect of radioactive contamination to determine whether it is radioactively contaminated. The work will be done on-site with equipment and staffing provided by another DOE-site. Waste determined not to be radioactively contaminated will be treated using commercial facilities permitted to treat hazardous waste.

Activity	Compliance Dates
complete survey	10/30/96

4.0 MIXED TRANSURANIC WASTE

Treatment Group(s):

Assorted Mixed Transuranic Waste

Treatment Technology

Respondents are required to develop treatment technologies and treat mixed transuranic (MTRU) waste at LANL according to the schedule set forth below:

Activity	Compliance Date
A. Development of treatment technologies	June 30, 1999
B. Submit permit application amendment or modification to NMED for treatment of MTRU	December 31, 1999
C. Begin treating MTRU	Six (6) months after NMED permit issuance
D. Complete treatment of existing MTRU to applicable regulatory standards	December 31, 2010

The above schedule is not based on the assumption that WIPP will be a disposal option or that DOE will receive a variance from treatment standards for land disposal of MTRU waste to be disposed at WIPP. All revisions to compliance dates shall be in accordance with the procedures set forth in the compliance order.

EXHIBIT A

LOS ALAMOS NATIONAL LABORATORY

MIXED WASTE SITE TREATMENT PLAN

COMPLIANCE PLAN VOLUME (CPV)

BACKGROUND VOLUME

Revision ~~4.0 and 5.0~~ 6.0

~~December 1997~~ July 1998

(Rev. ~~4.0 and 5.0 12/97~~ 6.0 7/98)

1.0 PURPOSE AND SCOPE OF THE COMPLIANCE PLAN VOLUME

1.1 Introduction

On October 6, 1992, Congress passed the Federal Facility Compliance Act (FFC Act) to address compliance by the United States Department of Energy (DOE) with the land disposal restrictions (LDR) for the storage of mixed waste set forth in Section 3004(j) of RCRA. The FFC Act requires the DOE to submit a Site Treatment Plan (STP) for developing treatment capacities and technologies to treat all of the facility's mixed waste, regardless of the time generated, to the standards promulgated pursuant to Section 3004(m) of RCRA. The FFC Act provides that the appropriate regulatory authority, the New Mexico Environment Department (NMED), may approve, approve with modifications or disapprove the STP. Prior to making such a determination, NMED is required by FFC Act to provide public notice, consider public comments, consult with the Environmental Protection Agency (EPA) and any other state in which a facility affected by the STP is located.

On March 31, 1995, DOE submitted its proposed STP to NMED for the treatment of mixed waste at the Los Alamos National Laboratory (LANL). On April 17, 1995, the public was given notice of and an opportunity to comment to NMED on the draft STP submitted by DOE. After considering public comment and otherwise complying with the FFC Act, NMED determined to approve the draft STP with modifications as provided in this document.

The STP is intended to fulfill the requirements of the FFC Act and establish an enforceable framework to allow DOE and the Regents of the University of California (Respondents) to achieve full compliance with LDR requirements under the New Mexico Hazardous Waste Act (HWA) and RCRA. The compliance dates set forth herein are enforceable time periods in which Respondents are required to develop treatment capacities and technologies, and treat or otherwise meet the requirements set forth for LDR under the HWA and RCRA. The STP will be fully implemented by a Compliance Order issued by NMED on or before October 6, 1995.

1.2 Contents

The STP contains two volumes and is intended to bring Respondents into compliance with LDR storage prohibitions under the HWA and RCRA. The Compliance Plan Volume of the STP provides overall schedules, including compliance dates, for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The Compliance Plan includes a schedule for the submittal of applications for permits, construction of treatment facilities, technology development, off-site transportation for treatment, and the treatment of mixed wastes in full compliance with the HWA and the implementing regulations at 20 NMAC 4.1, which

incorporates by reference 40 CFR Parts 260 through 270. The Background Volume of the STP contains progress reports as required in the Compliance Order. Respondents shall carry out the activities described in the STP, including the Compliance Plan Volume of the STP, in accordance with the schedules and requirements set forth in the STP and the Order.

1.3 STP Revisions and Amendments

The STP Compliance Plan Volume (CPV) has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order (FFCO), as amended and revised. Appendix A to the CPV provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

2.0 Compliance Schedules

The STP provides overall schedules for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The schedules include those activities required to bring existing waste treatment technologies into operation, process backlogged and currently generated waste, include schedules required to develop new facilities and capacity for treatment and establish an overall time frame for achieving compliance with the LDR requirements under the HWA and 20 NMAC 4.1.

2.1 Categories of Activities for Compliance Dates

The categories of activities for which compliance dates will be provided for different types of treatment approaches in the STP are listed in the tables below. The categories of activities are based on Section 3021(b)(1)(B)(I), (ii), and (iii) of the RCRA, to the extent appropriate.

2.1.1 Plans Where Treatment Technology Exists

For most of the mixed waste, treatment technologies have been identified and developed. For the waste that will be treated on-site, the categories of activities for compliance dates identified in Table I shall apply. Compliance dates for the activities identified in Table I may be found in Section 3.1.

Table I. Categories of Activities for Compliance for Mixed Waste with Existing Treatment Technologies.

A.	Submit permit applications to the NMED.
B.	Initiate construction as specified in the NMED permit.
C.	Complete system testing and commence operation.
D.	Begin treating mixed waste.
E.	Complete treatment of existing wastes to applicable regulatory standards.

2.1.2 Plans Where Technology Must Be Developed

For some mixed waste, no treatment technologies have been identified and developed, or the treatment technology must be modified or adapted to apply to such waste. For the waste that will be treated on-site, the categories of activities for compliance dates are identified in Table II and shall apply. Compliance dates for the activities identified in Table II may be found in Section 3.2.

Table II. Categories of Activities for Compliance Dates for Mixed Waste Without Existing Treatment Technologies.

A. Identify and develop technology.
B. Submit permit application to NMED; or
C. Submit a Notification of Intent to perform treatability study to NMED a minimum of 45 days prior to commencement of the study.
D. Initiate construction as specified in the NMED.
E. Commence systems testing.
F. Begin treating mixed waste.
G. Complete treatment of existing wastes to applicable regulatory standards.

2.1.3 Requirements Pertaining to Radionuclide Separation

The FFC Act sets additional requirements in cases in which DOE intends to conduct radionuclide separation of mixed waste. Should the DOE determine to do radionuclide separation of such mixed waste, DOE will schedule specific compliance dates based on category activities identified in Table III. "Radionuclide separation" shall mean segregating the radioactive portion of the mixed waste from the hazardous portion of the mixed waste.

Table III. Categories of Activities for Compliance Dates for Radionuclide Separation of Mixed Waste

A.	Complete an estimate of the volume of waste generated by each case of radionuclide separation.
B.	Complete an estimate of the volume of waste that would exist or be generated without radionuclide separation.
C.	Complete an estimate of the costs of waste treatment and disposal if radionuclide separation is used compared with the estimated costs if it is not used.
D.	Provide the assumptions underlying such estimates of waste volumes and cost estimates.
E.	Provide characterization methodologies for determining waste type.
F.	Submit a plan for treating or managing hazardous waste residues, accompanied by a NMED permit application.

2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment

In lieu of plans to treat mixed-waste on-site, DOE may treat waste at an off-site facility (at a commercial or non-commercial mixed waste treatment facility), or DOE may recycle waste at an off-site facility. Should DOE elect to use off-site recycling facilities in lieu of (or in combination with) treatment, it will follow the requirements prescribed in this Section in the same manner as if the waste was being shipped off-site for treatment. Any and all requirements

imposed by the off-site treatment/recycling facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment/recycling site shall be met by Respondents.

DOE shall notify the NMED Project Manager in writing as soon as possible if mixed waste is planned to be sent to a non-commercial facility. Notification should be made if possible when DOE is first considering such an option to allow NMED and the state to address any state issues or concerns with other states. The NMED Project Manager shall approve in writing the proposed off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility. Activities for mixed waste to be shipped off-site for treatment/recycling at a non-commercial facility are identified in Table V.

Should DOE decide to treat or recycle waste at a commercial off-site facility, DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility.

Table IV. Activities for Mixed Waste to be Shipped Off-Site for Treatment or Recycling at a Commercial facility

A.	Meet all regulatory requirements for off-site shipment.
B.	Provide documentation to NMED that waste has been received at an off-site facility for treatment or recycling within 45 working days of receipt of waste at the treatment facility.

2.1.4.1 Specific Site Requirements for Non-commercial Treatment Facilities

Shipment to Idaho National Engineering Laboratory

Prior to shipment, Idaho National Engineering Laboratory and Idaho Division of Environmental Quality shall be notified of any pending shipments of waste prior to shipment should DOE ship mixed low-level waste to INEL. Proper procedures including additional approvals (if necessary) and documentation shall be completed prior to the shipment of wastes to INEL. Management of post-treatment waste residuals or newly generated waste streams will be in accordance with the requirements of DOE, the State of Idaho and that state where they will be disposed. A modification to LANL's RCRA permit providing for the return of such wastes and/or residues to LANL must be approved by NMED prior to any such return of wastes and/or residuals to LANL. DOE will notify the NMED Project Manager in writing as soon as possible, and in any

event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams from INEL.

Shipments of low-level mixed wastes to planned facilities (not yet existing) will occur only after that treatment and schedules are approved by DOE-ID and the State of Idaho. Upon approval of the planned treatment facilities, the applicable protocol from the paragraph above will be implemented for mixed wastes to be treated at planned facilities.

Shipment to Oak Ridge Reservation

In the case that Oak Ridge Reservation (ORR) may not dispose of mixed-waste residues or new waste streams generated from off-site treatment, and they cannot be sent to another facility for disposal, then the residues may return to LANL. Should residual or newly generated waste streams be returned to LANL, the proper permits for the State of New Mexico must exist. DOE will notify the NMED Project Manager in writing as soon as possible, and in any event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams from ORR.

Table V. Activities for Mixed Waste to be Shipped Off-Site for Treatment or Recycling at a Non-commercial facility

A.	Request necessary approval from NMED for shipment of waste by category before shipping.
B.	Meet all regulatory requirements for off-site shipment.
C.	Provide documentation to NMED of confirmation of shipment date within 14 working days prior to sending waste to an off-site facility for treatment, disposal, or recycling, or storage pending treatment, disposal, or recycling.
D.	Provide documentation to NMED that waste has been received at an off-site facility for treatment within 45 working days of receipt of waste at the off-site facility.
E.	Meet all regulatory requirements to include RCRA Permit modifications for residual or newly generated waste streams after treatment or recycling.
F.	Provide documentation to NMED within 30 working days after receipt of residual or newly generated waste streams upon return to LANL.

2.1.5 Plans Related to Other Mixed Waste Activities

1. Activities other than the types of activities specifically called for in the FFC Act as requiring schedules are described in this STP. Some of these activities may be associated

with schedules which may contain compliance dates related to treatment of the DOE's mixed waste.

2. For mixed waste which is not sufficiently characterized to allow identification of appropriate treatment, notification of the characterization of such waste shall be in accordance with the annual update process described in the Compliance Order. If such characterization results in the addition or deletion of a treatability group or an increase in volume in a treatability group, a revision would be required pursuant to Section X of the Compliance Order.

3.0 LOW-LEVEL MIXED WASTE STREAMS

This Chapter presents proposed schedules for treatment technologies and the preferred options to treat low-level mixed waste streams (MLW or LLMW) at LANL. All preferred options not described below must be approved by NMED in accordance with the revision process pursuant to the Compliance Order.

The original October 4, 1995 STP inventory in each MLLW treatability group has been modified through the revision process in the FFCO. The table in CPV Appendix B provides a comprehensive summary of changes to the CPV covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of this revision. In Appendix B, the original STP inventory in each MLLW treatability group is denoted as subgroup 0 of that treatability group (e.g., the original volume of STP treatability group LA-W906 became LA-W906-0). Each revision that has since added volumes to individual treatability groups has resulted in creation of an additional subgroup, having the same number as the revision (e.g., LA-W906-4 was created in Revision 4.0, and LA-W906-5 was created in Revision 5.0).

In most Sections of this chapter, the subgroups of the treatability groups are not shown. In those cases, the Activities and Compliance Dates are applicable to the entire net volume of that treatability group. However, when subgroups of a treatability group have been assigned Activities and Compliance Dates unique to that subgroup, those subgroups are detailed in the text. For a complete listing of volumes by subgroup for all treatability groups, please refer to Appendix B.

3.1 Mixed Waste Streams for Which Technology Exists

The following subsections summarize LLMW treatability groups for which technology exists.

3.1.1 Off-site Treatment by Thermal Treatment

Treatability Group(s):

LLMW for ~~Off-site~~ Thermal Treatment (MWIR Treatment ID DS-S001)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
IPA wastes	LA-W901	D001, D009, F002, F003, F005	0 ~~7~~	0.00 ~~0.02~~
scintillation fluids	LA-W902	D001, F003, F005	0 ~~1~~	0.00 ~~0.0038~~
Totals			**0 ~~8~~**	**0.00 ~~0.02~~**

Treatment Technology:

The waste will be treated at an off-site facility that combusts organic liquid waste. Should DOE decide to treat waste at an off-site non-commercial facility, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	9/30/96
B. Complete shipping waste	12/30/96
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.2 Off-site Treatment by Stabilization or Macroencapsulation

Treatability Group(s):

LLMW for Stabilization

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (M^3)
lead blankets	LA-W903	D007, D008	0	0.00
soil with heavy metals	LA-W904	D004, D005, D006, D007, D008, D009, D010, D011	3 ~~59~~	0.45 ~~10.44~~ ~~10.54~~[a]
ER soils	LA-W905	D028, D029, F001, F005 D010, D011	0	0.00
Totals			3 ~~59~~	0.45 ~~10.44~~ ~~10.54~~[a]

~~[a] These redlined and struckout values represent corrections to CPV Revision 5.0 as discussed in the request for Revision 6.0. The struckout numbers are the incorrect Revision 5.0 values, the redline and struckout numbers are the corrected Revision 5.0 values which are replaced by the Revision 6.0 values (redline only). This footnote is information for the reader of this redline/strikeout version; this footnote is struck out to ensure it is deleted in the clean copy of the CPV Revision 6.0.~~

Treatment Technology:

The waste will be treated at an off-site facility that stabilizes or macroencapsulates wastes. Should DOE decide to treat waste at an off-site non-commercial facility, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	05/30/97
B. Complete shipping waste	12/30/98
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.3 Evaporative Oxidation (MWIR Treatment ID GJ-S801C)

Treatability Group(s):

LLMW for Evaporative Oxidation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906-0 ~~LA-W906-4~~ ~~LA-W906-5~~	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D030, D032, D033, D034, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	173	10.32[a] ~~10.89~~
Totals			**173**	**10.32[a]** ~~**10.89**~~

[a] ~~These redlined and struckout values represent corrections to CPV Revision 5.0 as discussed in the request for Revision 6.0. The struckout numbers are the incorrect Revision 5.0 values and the redline numbers are the corrected Revision 5.0 values. This footnote is information for the reader of this redline/strikeout version; this footnote is struck out to ensure it is deleted in the clean copy of the CPV Revision 6.0.~~

Note: See below for additional wastes in this treatability group

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site treatment facility (commercial or non-commercial) and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	12/30/96
B. Initiate construction	As specified in the NMED permit.
C. Complete system test and commence operation and begin treating mixed waste	6/19/99
D. Complete treatment of existing wastes to applicable regulatory standards, or	2/09/00
E. Complete shipment of existing wastes for treatment to an off- site facility.	2/09/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes

The following additional wastes will require management in this category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906-6	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D030, D032, D033, D034, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	88	5.74
Totals			**88**	**5.74**

Activities for wastes belonging to this treatability subgroup.

Activity	Compliance Dates
G. Complete shipment of existing wastes for treatment to an off- site facility.	2/09/03
H. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.4 Thermal Desorption (MWIR Treatment ID GJ-S801B)

LLMW for Thermal Desorption/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
organic-contaminated combustible solids	LA-W911	D001, D004, D008, D009, F001, F002, F003, F005	381 ~~378~~	36.07 ~~35.65~~
Totals			**381 ~~378~~**	**36.07 ~~35.65~~**

LLMW for Thermal Desorption

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
organic-contaminated noncombustible solids	LA-W919	D001, D003, D004, D005, D006, D007, D008, D009, D010, D011, D012, D015, D018, D019, D020, D022, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D042, D043, F001, F002, F003, F004, F005	227 ~~177~~	27.31 ~~18.62~~
Totals			**227 ~~177~~**	**27.31 ~~18.62~~**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	11/16/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	02/01/01
D. Complete treatment of existing wastes to applicable regulatory standards, or	02/14/02
E. Complete shipping of existing wastes to an off-site treatment facility.	02/14/02
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.5 Macroencapsulation (MWIR Treatment ID PX-S803)

Treatability Group(s):

LLMW for Macroencapsulation/Off-site treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
combustible debris	LA-W912	D001, D002, D003, D005, D006, D007, D008, D009, D011, D035, F001, F002, F003, F005	103 ~~97~~	15.17 ~~14.85~~
Totals			**103 ~~97~~**	**15.17 ~~14.85~~**

LLMW for Macroencapsulation

Treatability group		RCRA codes	Number of items	Net volume (m^3)
activated or inseparable lead	LA-W921	D008	34 ~~32~~	7.09 ~~8.12~~
noncombustible debris	LA-W922	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011	191 ~~157~~	36.46 ~~30.74~~
Totals			**225 ~~189~~**	**43.55 ~~38.86~~**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/04/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operation and begin treating mixed waste	02/01/00
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/25/00
E. Complete shipping of existing wastes to an off-site treatment facility.	08/25/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.6 Chemical Plating Waste Treatment Skid (MWIR Treatment ID LA-S004)

Treatability Group(s):

LLMW for Chemical Plating Waste Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous wastes with heavy metals	LA-W913	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011	139 ~~119~~	3.07 ~~2.05~~
corrosive solutions	LA-W914	D001, D002	197 ~~189~~	1.21 ~~1.17~~
aqueous cyanides, nitrates, chromates, and arsenates	LA-W915	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, F007, P029, P098	23	0.17
Totals			**359 ~~331~~**	**4.45 ~~3.39~~**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the

affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Resubmit revised permit application to NMED	10/30/96
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	03/17/00
D. Complete treatment of existing wastes to applicable regulatory standards, or	05/08/01
E. Complete shipping of existing wastes to an off-site treatment facility.	05/08/01
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.7 Water-reactive Metals Treatment Skid (MWIR Treatment ID LA-S003)

Treatability Group(s):

LLMW for Water-Reactive Metals Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
water-reactive wastes	LA-W916	D001, D003, D004, D005, D007, D008, D010, D011	113 ~~108~~	7.05 ~~6.37~~
Totals			**113 ~~108~~**	**7.05 ~~6.37~~**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	06/30/01
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	09/09/03
D. Complete treatment of existing wastes to applicable regulatory standards, or	04/21/04
E. Complete shipping of existing wastes to an off-site treatment facility.	04/21/04
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.8 Gas-scrubbing Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas-Scrubbing Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
compressed gases requiring scrubbing	LA-W917	D001, D002, P056	13	0.35
Totals			**13**	**0.35**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/28/03
E. Complete shipping of existing wastes to an off- site treatment facility.	08/28/03
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.9 Gas Oxidation Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas Oxidation Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
compressed gases requiring oxidation	LA-W918	D001, U226	177 ~~176~~	1.32
Totals			**177 ~~176~~**	**1.32**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/28/03
E. Complete shipping of existing wastes to an off-site treatment facility.	08/28/03
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.10 Mercury Amalgamation (MWIR Treatment ID PI-S801)

Treatability Group(s):

LLMW for Amalgamation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
elemental mercury	LA-W920	D006, D009, F005	79 ~~74~~	0.66 ~~0.54~~
Totals			**79 ~~74~~**	**0.66 ~~0.54~~**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/30/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	06/05/00
D. Complete treatment of existing waste to applicable regulatory standards, or	11/15/00
E. Complete shipping of existing wastes to an off-site treatment facility.	11/15/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.2 Mixed Waste Streams for Which Technology Requires Adaptation or for Which No Technology Exists

The following subsections summarize mixed waste streams for which technology requires adaptation or for which no technology exists.

3.2.1 Hydrothermal Processing

Treatability Group(s):

LLMW for Hydrothermal Processing/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
halogenated organic liquids	LA-W907	D001, D002, D003, D007, D009, D010, D011, D018, D019, D022, D028, D029, D035, D043, F001, F002, F003, F004, F005, U077, U080, U226, U227, U228, U236	525 ~~512~~	18.26 ~~18.12~~
nonhalogenated organic liquids	LA-W908	D001, D002, D003, D004, D007, D008, D009, D011, D018, D038, D040, F002, F003, F004, F005, U002, U019, U154, U169, U188, U220, U246	843 ~~814~~	20.20 ~~20.63~~
bulk oils	LA-W909	D002, D004, D005, D006, D007, D008, D009, D010, D011, D021, D027, D039, F001, F002, F003, F005	45 ~~64~~	5.81 ~~7.51~~
PCB wastes with RCRA components	LA-W910	D004, D005, D006, D007, D008, D009, D010, D011, D012, D015, D019, D027, D028, D030, D031, D032, D033, D034, D036, D039, D042, D043, F002, F003, F004, F005	40 ~~-4~~	2.75 ~~0.74~~
Totals			**1453 ~~1394~~**	**47.02 ~~47.00~~**

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
Liquid and solid oxidizers	LA-W923	D001, D003, D005	93 ~~86~~	1.37 ~~0.58~~
Totals			**93 ~~86~~**	**1.37 ~~0.58~~**

Treatment Technology:

The preferred destruction treatment technology option for this treatability group is Hydrothermal Processing which is a technology that needs development for adaptation to treat radioactive and PCB-bearing waste. This treatment technology is being adapted at LANL and is expected to be developed into a mobile treatment unit. The GJPO schedule for deployment of the unit indicates its possible availability to LANL after February 2002. Shipment off-site for treatment is a parallel preferred option. Respondents shall submit treatment or off-site shipment schedules and

options for NMED's approval by November 30, 1998. Treatment or other options other than off-site shipment shall be carried out pursuant to the revision process. Off-site shipments must be completed by February 2002.

Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

3.3 Mixed Waste Requiring Further Characterization or for Which Technology Assessment Has Not Been Done (MWIR Treatment ID LA-S701)

Treatability Group(s):

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
lead wastes - TBD	LA-W924	D003, D008	129	40.16
mercury wastes - TBD	LA-W925-0	D007, D008, D009, F001	63	18.30
compressed gases - TBD	LA-W926	D001, D007, D009, D022, P056, U080, U226	10	1.25
biochemical laboratory wastes	LA-W927	D001, D003	9	1.34
dewatered treatment sludge	LA-W928	see Subsection 3.3 in the Background Volume	61	12.71
Totals			**272**	**73.76**

Note: See below for additional wastes in some of these treatability groups

Treatment Technology:

The following steps will be taken to properly characterize this waste:

- Conduct additional generator interviews
- Prepare a sampling plan for waste not adequately characterized

- Conduct sampling and analysis
- Determine treatment options

Activities for wastes originally belonging to these treatability groups as listed above.

Activity	Compliance Dates
A. Complete generator interviews	10/30/95
B. Complete sampling and analysis plan	1/30/96
C. Complete sampling and analysis	9/30/98
D. Complete determination of treatment options	12/20/98
E. Complete shipping of existing wastes to an off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups.	12/20/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes and treatability groups:

The following additional wastes will require management in this category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	RCRA Codes	Number of items	Net volume (m3)
mercury wastes-TBD	LA-W925-4 LA-W925-5 LA-W925-6	D003, D007, D008, D009, F001, F002, F005	74 ~~37~~	2.61 ~~0.42~~
~~mercury wastes-TBD~~	~~LA-W925-5~~	~~D007, D008, D009, F001~~	~~14~~	~~1.52~~
explosives	LA-W932	D003	1	0.000001
labpacks	LA-W933	D001, D002, D003, D004, D005, D006, D007, D008, D010, F003, F005, D011, P012, P029, P098, P106, P113, P120, U131, U144, U145, U188, U190, U204, U216, U219	149 ~~142~~	0.30
Totals			**224 ~~194~~**	**2.91 ~~2.24~~**

Activities for wastes belonging to these treatability groups and subgroups.

Activity	Compliance Dates
G. Complete sampling and analysis plan	1/30/99
H. Complete sampling and analysis	9/30/01
I. Complete determination of treatment options	12/20/01
J. Complete shipping of wastes to an off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups	12/20/03
K. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at off-site facility

3.4 Plans for Other Types of Activities

The following subsection summarizes plans for other types of activities.

3.4.1 Lead Decontamination (MWIR Treatment ID LA-S001)/Off-site Treatment (preferred option)

Treatability Group(s):

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net volume (m^3)	No. Items	Net volume (m^3)	No. Items	Net volume (m^3)
lead for surface contamination	LA-W930-0 LA-W930-5	0 — ~~89 – 6~~ [a]	0.00 ~~21.02~~ ~~6.59~~ [a]	134 ~~62~~ ~~145~~ [a]	49.19 ~~36.16~~ ~~50.59~~ [a]	134 ~~151~~	49.19 ~~57.18~~
Totals		0 — ~~89 – 6~~ [a]	**0.00** ~~21.02~~ ~~6.59~~ [a]	**134** ~~62~~ ~~145~~ [a]	**49.19** ~~36.16~~ ~~50.59~~ [a]	**134** ~~151~~	**49.19** ~~57.18~~

~~[a] These redlined and struckout values represent corrections to CPV Revision 5.0 as discussed in the request for Revision 6.0. The struckout numbers are the incorrect Revision 5.0 values, the redline and struckout numbers are the corrected Revision 5.0 values which are replaced by the Revision 6.0 values (redline only). This footnote is information for the reader of this redline/strikeout version; this footnote is struck out to ensure it is deleted in the clean copy of the CPV Revision 6.0.~~

Note: See below for additional wastes in this treatability group

Treatment Technology:

This treatability group contains two categories of lead for decontamination:

The first category is lead in the original LA-W930-0 inventory that is amenable to decontamination in the on-site lead decontamination trailer, which was designed to decontaminate simple lead shapes, such as lead bricks, of certain physical dimensions. The trailer is on-site and has operated, but needs an upgrade for prolonged operation.

The lead in the second category is lead in the original LA-W930-0 inventory that is not amenable to decontamination in the on-site lead decontamination trailer, plus subsequent additions to the original inventory shown in Appendix B. This lead will be processed using other on-site decontamination processes, such as dry sandblasting or hand-scrubbing, or sent to off-site lead decontamination services.

Any lead not acceptable for on-site or off-site lead decontamination, plus any lead unsuccessfully decontaminated, will be designated for treatment and disposal at an off-site facility, or for recycle through an off-site capability, such as metal melting to create shielding blocks or a DOE lead bank. Non-conforming items will be reassigned to appropriate treatability groups in accordance with the FFCO.

Should DOE decide to treat or recycle waste at an off-site non-commercial facility in lieu of plans to treat or recycle such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment/recycle option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment/ recycling facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment/recycling site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility.

Lead shapes and forms in the first category.

Activity	Compliance Date
A. Complete lead decontamination	09/30/97

Lead shapes and forms in the second category.

Activity	Compliance Date
A. Provide schedule for development of lead processing techniques and options	06/30/96
B. Segregate lead waste into decontamination groupings	07/31/97
C. Complete shipment of wastes to decontamination operations, or	12/02/98
D. Determine treatment/disposal or other recycle options for lead waste not acceptable for decontamination	12/02/98
E. Complete treatment/disposal operations or other recycle operations for lead waste not acceptable for decontamination	07/31/99
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes

The following additional wastes will require management in the second category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net volume (m^3)	No. Items	Net volume (m^3)	No. Items	Net volume (m^3)
lead for surface contamination	LA-W930-6	0	0.00	14	12.06	14	12.06
Totals		**0**	**0.00**	**14**	**12.06**	**14**	**12.06**

Activities for wastes belonging to this treatability subgroup.

Activity	Compliance Date
G. Complete shipment of wastes to decontamination operations, or	12/02/99
H. Determine treatment/disposal or other recycle options for lead waste not acceptable for decontamination	12/02/99
I. Complete treatment/disposal operations or other recycle operations for lead waste not acceptable for decontamination	07/31/00
J. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.4.2 Sorting, Surveying, and Decontamination (MWIR Treatment ID GJ-S804)

Treatability Group(s):

Treatability group	MWIR waste ID	Number of items	Net volume (m^3)
1. nonradioactive or suspect waste items to be surveyed	LA-W929-0(1)	0	0.0
2. nonradioactive or suspect waste items to receive RCRA and radiological characterization	LA-W929-0(2)	0 ~~2~~	0.00 ~~0.0076~~
3. nonradioactive or suspect waste items that cannot or should not be sampled	LA-W929-0(3)	0	0.0
Totals		**0 ~~2~~**	**0.00 ~~0.0076~~**

Note: See below for additional wastes in this treatability group

Treatment Technology:

The waste items in part 1 of the original volume in this treatability group will be surveyed using a field operation that will survey waste suspect of radioactive contamination to determine whether it is radioactively contaminated. The work will be done on-site with equipment and staffing provided by LANL or another DOE site. Waste determined not to be radioactively contaminated will be treated using commercial facilities permitted to treat hazardous waste; waste determined to be radioactively contaminated will be assigned to applicable treatability groups and/or sent to offsite facilities for appropriate treatment.

Waste items in part 2 of this treatability group will be surveyed using complete RCRA and radiological sampling and characterization. Waste sampled under this alternative will be treated and disposed as low-level mixed waste; the waste will be assigned to applicable treatability groups and/or sent to off-site facilities for appropriate treatment based on the results of this characterization.

Sampling for this characterization alternative will be conducted in accordance with RCRA SW-846 methods. To ensure an adequate volume of waste material is available for sampling and to maximize the cost effectiveness of the sampling activities, some lab packed and other waste items may be bulked into larger volume containers; all RCRA waste codes will be transferred to the bulked wastes to ensure correct RCRA categorization is maintained. It may be found, when preparing a given drum for sampling, (for example, solid small volume waste items that cannot be sampled in accordance with EPA SW-846 methods) are in fact not amenable to sampling and should have been included in the item count for group 3 . If visual inspection so indicates, these waste items will be transferred to Group 3 and assigned to applicable treatability groups based on existing knowledge.

Waste items in part 3 of this treatability group which are confirmed not amenable to sampling (e.g., lead-acid batteries, spray paint cans) will be assigned to applicable treatability groups based on existing knowledge. It may be found, when inspecting a given drum, that some items can in fact be sampled in accordance with EPA SW-846 methods and should have been included in the item count for Group 2. If visual inspection so indicates, these waste items will be transferred to Group 2 and sampled accordingly.

Additional compliance dates will be proposed for any waste items in this treatability group found not to have available treatment/disposal options following a complete review of all survey, analytical, or visual inspection data obtained through these processes.

For all waste items in this treatability group, shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within (45) working days of receipt of waste at the treatment facility.

Activities for waste items in part 1 of this treatability group.

Activity	Compliance Dates
A. Complete field survey	10/30/96
B. Submit documentation declaring waste items as nonradioactive, or submit documentation assigning waste items to applicable treatability groups	2/28/97
C. Propose additional compliance dates if necessary	4/30/97

Activities for waste items in part 2 of this treatability group.

Activity	Compliance Dates
D. Complete RCRA and radiological sampling	1/28/97
E. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	2/28/97
F. Propose additional compliance dates if necessary	4/30/97

Activities for waste items in part 3 of this treatability group.

Activity	Compliance Dates
G. Complete visual verification	1/28/97
H. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	6/30/97
I. Propose additional compliance dates if necessary	9/30/97

Additional wastes:

Treatability group	MWIR waste ID	Number of items	Net volume (m^3)
Nonradioactive or suspect waste items	LA-W929-5	0 ~~1~~	0.00 ~~0.00002~~
Totals		**0 ~~1~~**	**0.00 ~~0.00002~~**

Activities for items added as subgroup 5 of this treatability group.

Activity	Compliance Dates
J. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	3/31/98
K. Propose additional Compliance Dates if necessary	3/31/98

3.5 Management of "Missing" Items.

Waste Category:

Category	MWIR waste ID	No. Items	Net volume (m^3)
Missing/nonexistent/TBV	None	48	8.81
Totals		**48**	**8.81**

Treatment Technology:

During visual inspections and sampling activities in support of STP waste work-off, occasionally an item cannot be found, or it is not located in the containers in which it is expected to be, according to the LANL data files for the waste item. In some instances, such items could not be verified as having ever been received in storage at LANL, and further follow-up investigations of the record files revealed that for various reasons, the waste items were never in fact generated, although on paper they were included in the original STP inventory.

In these instances, DOE and UC, and their contractors, perform a thorough inspection of both the physical inventories and the data files. When DOE and UC determine that an STP covered waste item does not exist, transfer of the item to the category called *"Missing/ nonexistent/TBV (to be verified)"*, is requested through the revision process associated with the next *Annual Update.*

DOE and UC will re-verify the absence of all *"Missing/ nonexistent/TBV"* items container-by-container, as each STP waste item is being sampled, repackaged, or otherwise prepared for on- or off-site treatment. The final verification that all *"Missing/ nonexistent/TBV"* items do not in fact exist will be completed by April 21, 2004, at which time all remaining MLLW items in the original STP inventory will have been treated. At that time, DOE and UC will request deletion of all items having been fully verified as missing or nonexistent.

At any time during the re-verification process, should any of these items be discovered to exist, NMED will be notified, and approval will be requested for assignment of the rediscovered items to the appropriate TG. If necessary, they will be assigned new Activities and Compliance Dates, in accordance with the terms of the FFCO.

The following steps will be taken to verify presence or absence of this waste:

Activity	Compliance Dates
A. Initiate re-verification process on a shipment-by-shipment basis	01/03/98
B. Complete re-verification process	04/21/04
C. Re-assign any existing items to appropriate treatability groups	04/21/04
D. Complete treatment of existing wastes to applicable regulatory standards, or	10/30/04
E. Complete shipping of existing wastes to an off-site treatment facility	10/30/04
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

4.0 MIXED TRANSURANIC WASTE

Treatment Group(s):

Assorted Mixed Transuranic Waste

Treatment Technology

Respondents are required to develop treatment technologies and treat mixed transuranic (MTRU) waste at LANL according to the schedule set forth below:

Activity	Compliance Date
A. Development of treatment technologies	June 30, 1999
B. Submit permit application amendment or modification to NMED for treatment of MTRU	December 31, 1999
C. Begin treating MTRU	Six (6) months after NMED permit issuance
D. Complete treatment of existing MTRU to applicable regulatory standards	December 31, 2010

The above schedule is not based on the assumption that WIPP will be a disposal option or that DOE will receive a variance from treatment standards for land disposal of MTRU waste to be disposed at WIPP. All revisions to compliance dates shall be in accordance with the procedures set forth in the compliance order.

CPV APPENDIX A
HISTORY OF STP REVISIONS AND AMENDMENTS

As discussed in CPV Section 1.3, the STP Compliance Plan Volume has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order, as amended and revised. This Appendix provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

To date, there have been six revisions and two amendments to the CPV. In addition, the FFCO was amended once, on May 20, 1997. The following Table A-1 provides a summary of these changes. More detailed descriptions can be found in the CPV Update portion of each year's STP *Annual Update,* and the original correspondence requesting each change.

Table A-1. SUMMARY OF CHANGES TO THE CPV AND THE FFCO

Action	Document Modified	Effective Date	Effect on FFCO/STP
Rev. 1.0	STP/CPV	6/12/96	Added off-site treatment as a parallel preferred option for most MLLW treatability groups
Rev. 2.0	STP/CPV	12/9/96	Reduced volume of LA-W928 by approving reclassification of sludges as LLW
Amendment 1.0	STP/CPV	10/30/96	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Rev. 3.0	STP/CPV	1/27/97	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Amendment 1.0	FFCO	5/20/97	Modified FFCO Sections IV, V, IX, and X to streamline waste transfers and deletions
Amendment 2.0	STP/CPV	9/4/97	Extended CPV Activity 3.1.2B Compliance Date to 12/29/97
Rev. 4.0	STP/CPV	*12/29/97* ~~*(to be added)*~~	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added treatability groups, and deleted treated items
Rev. 5.0	STP/CPV	*12/29/97* ~~*(to be added)*~~	Added volumes reported in FY95 and FY96 *Annual Updates* (and certain other items) to several treatability groups, added Activities and Compliance Dates, added CPV Appendices, and deleted treated items
Rev. 6.0	STP/CPV	*(to be added)*	Added volumes reported in FY97 *Annual Update* to several treatability groups, added certain Activities and Compliance Dates, adjusted several original inventory volumes, transferred one LA-W929 item to a new treatability group, and deleted treated items

CPV APPENDIX B
SUMMARY OF CPV INVENTORY CHANGES

The following tables provides a comprehensive summary of changes to the CPV covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of this revision. The volumes given in the tables reflect changes to the individual MLLW treatability group volumes due to increases or decreases, as noted. Table B-1 reports the inventory changes arising from Revision 6.0, while Table B-2 reports the inventory changes previously approved.

Key to Reading the Subgroups

The original STP inventory in each MLLW treatability group is now denoted as subgroup -0 of that treatability group (e.g., the original volume of STP treatability group LA-W906 became LA-W906-0). The original October 4, 1995 STP inventory in each MLLW treatability group has been modified through the revision process in the FFCO. The following revisions have affected volumes in individual treatability groups to date:

Revision	Effect on Volumes
Rev. 2.0	Reduced volume of LA-W928
Rev. 3.0	Divided original volume of LA-W929 into three subgroups
Rev. 4.0	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added new treatability groups
Rev. 5.0	~~Added~~ Increased and decreased volumes in ~~to~~ several treatability groups
Rev. 6.0	Increased and decreased volumes in several treatability groups, transferred the volume in LA-W929-5 to another treatability group

Each revision that has added volumes to individual treatability groups has resulted in creation of an additional subgroup of that treatability group, having the same number as the revision (e.g., LA-W906-4 was created in Revision 4.0, and LA-W906-5 was created in Revision 5.0).

Additions and Deletions to Date

To date, MLLW inventory increases and decreases have been incorporated into the covered waste inventories through Revisions 2.0, 4.0, ~~and~~ 5.0, and 6.0. Revision 2.0 incorporated decreases in treatability group LA-W928 due to deletion of covered waste items. Rev. 4.0 resulted in decreases to LA-W929 and increases in other TGs, primarily by transferring LA-W929 items to other TGs. Rev. 5.0 and 6.0 resulted in both additions to and deletions of covered waste volumes (i.e., increases and decreases) in a number of TGs. Therefore, the

Appendix B tables that follows shows that subgroups -4, ~~and~~ -5, and -6 exist for some treatability groups,-but not for all.

These ~~This~~ tables provides a master list of MLLW inventory changes presented in the *Annual Updates,* to enable users of the STP to track all changes in the LANL MLLW covered waste inventory that occurred since the original STP inventory was established in the October 4, 1995 FFCO/CPV.

Changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY97 ~~FY96~~. However, only those reported as of Rev. 6.0 ~~5.0 *"Other Changes"*~~ are included in this table. All others will be reported in the next *Annual Update* and associated revision request. Therefore, the *"Net Covered Waste Inventory"* may not fully reflect the actual CPV covered waste inventory as of the date of this revision, in some instances.

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.1	IPA Wastes	LA-W901-0	7	0.02	Decrease 7	Decrease 0.02			0	0.00	0	0.00
3.1.1	Scintillation Fluids	LA-W902-0	1	0.0038	Decrease 1	Decrease 0.0038			0	0.00	0	0.00
3.1.2	Lead Blankets	LA-W903-0	0	0.00					0	0.00	0	0.00
3.1.2	Soil with Heavy Metals	LA-W904-0	58	~~10.37~~ 10.43[a]	Decrease 6 Decrease 2 Decrease 46 Decrease 2	Decrease 0.62[b] Decrease 0.42[c] Decrease 8.91 Decrease 0.14			2	0.34		
		LA-W904-5	1	0.11					1	0.11	3	0.45
3.1.2	ER Soils	LA-W905-0	0	0.00					0	0.00	0	0.00

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STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.3	Aqueous Organic Liquids	LA-W906-0	45	1.65					45	1.65		
		LA-W906-4	27	0.36					27	0.36		
		LA-W906-5	101	~~8.88~~ 8.31[d]					101	8.31		
		LA-W906-6	0	0.00	Increase 88	Increase 5.74			88	5.74	261	16.06
3.1.4	Organic-Contaminated Combustible Solids	LA-W911-0	305	28.10	Increase 2	Increase 0.42[c]			307	28.52		
		LA-W911-4	33	0.68					33	0.68		
		LA-W911-5	40	6.87					40	6.87		
		LA-W911-6	0	0.00	Increase 1	Increase 0.0038			1	0.0038	381	36.07
3.1.4	Organic-Contaminated Noncombus-tible Solids	LA-W919-0	79	7.71	Increase 1	Increase 0.11[e]			80	7.82		
		LA-W919-4	9	0.38					9	0.38		
		LA-W919-5	89	10.53					89	10.53		
		LA-W919-6	0	0.00	Increase 49	Increase 8.58			49	8.58	227	27.31

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.5	Combustible Debris	LA-W912-0	83	13.82					83	13.82		
		LA-W912-4	9	0.75					9	0.75		
		LA-W912-5	5	0.28					5	0.28		
		LA-W912-6	0	0.00	Increase 6	Increase 0.32			6	0.32	103	15.17
3.1.5	Activated or Inseparable Lead	LA-W921-0	14	4.77	Decrease 1 Decrease 2	Decrease 0.06[f] Decrease 1.72			11	2.99		
		LA-W921-5	18	3.35	Decrease 4	Decrease 0.83[f]			14	2.52		
		LA-W921-6	0	0.00	Increase 9	Increase 1.58			9	1.58	34	7.09
3.15	Non-combustible Debris	LA-W922-0	41	5.62	Decrease 14	Decrease 2.915			27	2.71		
		LA-W922-4	53	2.83					53	2.83		
		LA-W922-5	63	22.29	Decrease 3	Decrease 0.62			60	21.67		
		LA-W922-6	0	0.00	Increase 51	Increase 9.25			51	9.25	191	36.46

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.6	Aqueous Wastes with Heavy Metals	LA-W913-0	83	1.50					83	1.50		
		LA-W913-4	25	0.40					25	0.40		
		LA-W913-5	11	0.15					11	0.15		
		LA-W913-6	0	0.00	Increase 20	Increase 1.02			20	1.02	139	3.07
3.1.6	Corrosive Solutions	LA-W914-0	60	0.69					60	0.69		
		LA-W914-4	90	0.36					90	0.36		
		LA-W914-5	39	0.12					39	0.12		
		LA-W914-6	0	0.00	Increase 8	Increase 0.04			8	0.04	197	1.21
3.1.6	Aqueous Cyanides, Nitrates, Chromates, and Arsenates	LA-W915-0	9	0.13					9	0.13		
		LA-W915-4	3	0.002					3	0.002		
		LA-W915-5	11	0.04					11	0.04	23	0.17
3.1.7	Water-Reactive Wastes	LA-W916-0	78	6.03					78	6.03		
		LA-W916-4	26	0.31					26	0.31		
		LA-W916-5	4	0.03					4	0.03		
		LA-W916-6	0	0.00	Increase 5	Increase 0.68			5	0.68	113	7.05
3.1.8	Compressed Gases Requiring Scrubbing	LA-W917-0	13	0.35					13	0.35	13	0.35

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.9	Compressed Gases Requiring Oxidation	LA-W918-0	6	0.08					6	0.08		
		LA-W918-4	168	1.23					168	1.23		
		LA-W918-5	2	0.01					2	0.01		
		LA-W918-6	0	0.00	Increase 1	Increase 0.0002			1	0.0002	177	1.32
3.1.10	Elemental Mercury	LA-W920-0	45	0.50					45	0.50		
		LA-W920-4	20	0.02					20	0.02		
		LA-W920-5	9	0.02					9	0.02		
		LA-W920-6	0	0.00	Increase 5	Increase 0.12			5	0.12	79	0.66
3.2.1	Halogenated Organic Liquids	LA-W907-0	384	16.58	Decrease 3	Decrease 0.0076			381	16.57		
		LA-W907-4	97	1.05					97	1.05		
		LA-W907-5	31	0.49					31	0.49		
		LA-W907-6	0	0.00	Increase 16	Increase 0.15			16	0.15	525	18.26

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Nonhalogen-ated Organic Liquids	LA-W908-0	275	14.34	Increase 0[g] Decrease 4 Decrease 0[h]	Increase 0.076 Decrease 0.49 Decrease 0.11			271	13.82		
		LA-W908-4	409	3.38					409	3.38		
		LA-W908-5	130	2.91					130	2.91		
		LA-W908-6	0	0.00	Increase 33	Increase 0.09			33	0.09	843	20.20
3.2.1	Bulk Oils	LA-W909-0	28	3.75	Increase 0[i] Decrease 23	Increase 0.47 Decrease 2.22			5	2.00		
		LA-W909-4	8	1.48					8	1.48		
		LA-W909-5	28	2.28					28	2.28		
		LA-W909-6	0	0.00	Increase 4	Increase 0.05			4	0.05	45	5.81
3.2.1	PCB Wastes with RCRA Components	LA-W910-0	4	0.74	Increase 6	Increase 0.62[b]			10	1.36		
		LA-W910-6	0	0.00	Increase 30	Increase 1.39			30	1.39	40	2.75

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Liquid and Solid Oxidizers	LA-W923-0	6	0.117					6	0.117		
		LA-W923-4	67	0.145					67	0.145		
		LA-W923-5	13	0.317					13	0.317		
		LA-W923-6	0	0.00	Increase 7	Increase 0.795			7	0.795	93	1.37
3.3	Lead Waste - TBD	LA-W924-0	129	40.16					129	40.16	129	40.16
3.3	Mercury Wastes - TBD	LA-W925-0	63	18.30					63	18.30		
		LA-W925-4	37	0.42					37	0.42		
		LA-W925-5	14	1.52					14	1.52		
		LA-W925-6	0	0.00	Increase 23	Increase 0.67			23	0.67	137	20.91
3.3	Compressed Gases - TBD	LA-W926-0	10	1.25					10	1.25	10	1.25
3.3	Biochemical Laboratory Wastes	LA-W927-0	9	1.34					9	1.34	9	1.34
3.3	Dewatered Treatment Sludge	LA-W928-0	61	12.71					61	12.71	61	12.71
3.3	Explosives	LA-W932-0	0	0.00					0	0.00		
		LA-W932-4	1	0.000001					1	0.000001	1	0.000001

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Lab Packs	LA-W933-0	0	0.00					0	0.00		
		LA-W933-4	114	0.17					114	0.17		
		LA-W933-5	28	0.13					28	0.13		
		LA-W933-6	0	0.00	Increase 6	Increase 0.003	Increase 1	Increase 0.00002[j]	7	0.003	149	0.30
3.4.1	Lead for Surface Decontamin-ation	LA-W930-0	36	33.43	Decrease 1 Decrease 4 Decrease 6 Decrease 2	Decrease 0.11[k] Decrease 0.35[k] Decrease 1.04 Decrease 5.66			23	26.27		
		LA-W930-5	115	23.75	Decrease 1 Decrease 3	Decrease 0.21[k] Decrease 0.62[k]			111	22.92		
		LA-W930-6	0	0.00	Increase 14	Increase 12.06			14	12.06	148	61.25

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.4.2	Nonradioactive or Suspect Waste Items to be Surveyed	LA-W929-0	2	0.0076	Decrease 2	Decrease 0.0076			0	0.00		
		LA-W929-5	1	0.00002			Decrease 1	Decrease 0.00002[j]	0	0.00	0	0.00
None[l]	Lead Requiring Sorting	LA-W931-0	23	4.76	Decrease 23 Increase 0[m]	Decrease 4.78 Increase 0.02			0	0.00		
		LA-W931-5	8	0.44					8	0.44		
		LA-W931-6	0	0.00	Increase 4	Increase 0.64			4	0.64	12	1.08
None[n]	IPA	None	0	0.00	Increase 1 Decrease 1	Increase 0.0005[n] Decrease 0.0005[n]			0	0.00	0	0.00

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Category	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)			Items	Volume (m^3)	Items	Volume (m^3)
3.5	Missing/ nonexistent/ TBV	NONE (Revision 5)	48	8.81					48	8.81	48	8.81

NOTES:

[a] This correction in LA-W904 volume arises from an error in the Appendix B in Revision 4/5 as discussed in Revision 6.0.

[b] This transfer of LA-W904 waste to LA-W910 was approved by NMED on September 18, 1997 as discussed in Revision 6.0

[c] This transfer of LA-W904 waste to LA-W911 was approved by NMED on September 18, 1997 as discussed in Revision 6.0

[d] This correction in LA-W906 volume arises from an error in the Appendix B in Revision 4/5 as discussed in Revision 6.0.

[e] The volume increase arises from the return of unused treatability study sample. It has been returned to the original inventory of LA-W919 (subgroup -0) consistent with the inventory subgroup from which the sample was removed.

[f] These 5 items in subgroups LA-W921-0 and -5 (0.89 m^3 total) were shipped on December 9, 1996 as discussed in DOE's letter dated December 24, 1996.

[g] This increase in LA-W908 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.

[h] This decrease in LA-W908 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.

[i] This correction in LA-W909 volume arises from an error in Appendix B in Revision 4/5 as discussed in Revision 6.0.

[j] This transfer of LA-W929 waste to LA-W933 is discussed in Revision 6.0.

[k] The shipment of 0.32 m^3, as reported in the FY97 STP *Annual Update*, consisted of 1 item (0.11 m^3) from subgroup LA-W930-0 and 1 item (0.21 m^3) from subgroup -5. The shipment of 0.97 m^3, as reported in the FY97 STP *Annual Update*, consisted of 4 items (0.35 m^3) from subgroup -0 and 3 items (0.62 m^3) from subgroup -5.

[l] This treatability group (LA-W931, *Lead Requiring Sorting*) is not listed in the CPV; however it is discussed in section 3.4.3 of the *Background Volume*.

[m] This increase in LA-W931 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.

[n] This item of isopropyl alcohol waste was not included in the original STP inventory and it was shipped for treatment as discussed in DOE's letter dated January 9, 1997.

EXHIBIT A

LOS ALAMOS NATIONAL LABORATORY

MIXED WASTE SITE TREATMENT PLAN

COMPLIANCE PLAN VOLUME (CPV)

BACKGROUND VOLUME

Revision 6.0

July 1998

(Rev. 6.0 7/98)

1.0 PURPOSE AND SCOPE OF THE COMPLIANCE PLAN VOLUME

1.1 Introduction

On October 6, 1992, Congress passed the Federal Facility Compliance Act (FFC Act) to address compliance by the United States Department of Energy (DOE) with the land disposal restrictions (LDR) for the storage of mixed waste set forth in Section 3004(j) of RCRA. The FFC Act requires the DOE to submit a Site Treatment Plan (STP) for developing treatment capacities and technologies to treat all of the facility's mixed waste, regardless of the time generated, to the standards promulgated pursuant to Section 3004(m) of RCRA. The FFC Act provides that the appropriate regulatory authority, the New Mexico Environment Department (NMED), may approve, approve with modifications or disapprove the STP. Prior to making such a determination, NMED is required by FFC Act to provide public notice, consider public comments, consult with the Environmental Protection Agency (EPA) and any other state in which a facility affected by the STP is located.

On March 31, 1995, DOE submitted its proposed STP to NMED for the treatment of mixed waste at the Los Alamos National Laboratory (LANL). On April 17, 1995, the public was given notice of and an opportunity to comment to NMED on the draft STP submitted by DOE. After considering public comment and otherwise complying with the FFC Act, NMED determined to approve the draft STP with modifications as provided in this document.

The STP is intended to fulfill the requirements of the FFC Act and establish an enforceable framework to allow DOE and the Regents of the University of California (Respondents) to achieve full compliance with LDR requirements under the New Mexico Hazardous Waste Act (HWA) and RCRA. The compliance dates set forth herein are enforceable time periods in which Respondents are required to develop treatment capacities and technologies, and treat or otherwise meet the requirements set forth for LDR under the HWA and RCRA. The STP will be fully implemented by a Compliance Order issued by NMED on or before October 6, 1995.

1.2 Contents

The STP contains two volumes and is intended to bring Respondents into compliance with LDR storage prohibitions under the HWA and RCRA. The Compliance Plan Volume of the STP provides overall schedules, including compliance dates, for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The Compliance Plan includes a schedule for the submittal of applications for permits, construction of treatment facilities, technology development, off-site transportation for treatment, and the treatment of mixed wastes in full compliance with the HWA and the implementing regulations at 20 NMAC 4.1, which

incorporates by reference 40 CFR Parts 260 through 270. The Background Volume of the STP contains progress reports as required in the Compliance Order. Respondents shall carry out the activities described in the STP, including the Compliance Plan Volume of the STP, in accordance with the schedules and requirements set forth in the STP and the Order.

1.3 STP Revisions and Amendments

The STP Compliance Plan Volume (CPV) has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order (FFCO), as amended and revised. Appendix A to the CPV provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

2.0 Compliance Schedules

The STP provides overall schedules for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The schedules include those activities required to bring existing waste treatment technologies into operation, process backlogged and currently generated waste, include schedules required to develop new facilities and capacity for treatment and establish an overall time frame for achieving compliance with the LDR requirements under the HWA and 20 NMAC 4.1.

2.1 Categories of Activities for Compliance Dates

The categories of activities for which compliance dates will be provided for different types of treatment approaches in the STP are listed in the tables below. The categories of activities are based on Section 3021(b)(1)(B)(I), (ii), and (iii) of the RCRA, to the extent appropriate.

2.1.1 Plans Where Treatment Technology Exists

For most of the mixed waste, treatment technologies have been identified and developed. For the waste that will be treated on-site, the categories of activities for compliance dates identified in Table I shall apply. Compliance dates for the activities identified in Table I may be found in Section 3.1.

Table I. Categories of Activities for Compliance for Mixed Waste with Existing Treatment Technologies.

A.	Submit permit applications to the NMED.
B.	Initiate construction as specified in the NMED permit.
C.	Complete system testing and commence operation.
D.	Begin treating mixed waste.
E.	Complete treatment of existing wastes to applicable regulatory standards.

2.1.2 Plans Where Technology Must Be Developed

For some mixed waste, no treatment technologies have been identified and developed, or the treatment technology must be modified or adapted to apply to such waste. For the waste that will be treated on-site, the categories of activities for compliance dates are identified in Table II and shall apply. Compliance dates for the activities identified in Table II may be found in Section 3.2.

Table II. Categories of Activities for Compliance Dates for Mixed Waste Without Existing Treatment Technologies.

A. Identify and develop technology.
B. Submit permit application to NMED; or
C. Submit a Notification of Intent to perform treatability study to NMED a minimum of 45 days prior to commencement of the study.
D. Initiate construction as specified in the NMED.
E. Commence systems testing.
F. Begin treating mixed waste.
G. Complete treatment of existing wastes to applicable regulatory standards.

2.1.3 Requirements Pertaining to Radionuclide Separation

The FFC Act sets additional requirements in cases in which DOE intends to conduct radionuclide separation of mixed waste. Should the DOE determine to do radionuclide separation of such mixed waste, DOE will schedule specific compliance dates based on category activities identified in Table III. "Radionuclide separation" shall mean segregating the radioactive portion of the mixed waste from the hazardous portion of the mixed waste.

Table III. Categories of Activities for Compliance Dates for Radionuclide Separation of Mixed Waste

A.	Complete an estimate of the volume of waste generated by each case of radionuclide separation.
B.	Complete an estimate of the volume of waste that would exist or be generated without radionuclide separation.
C.	Complete an estimate of the costs of waste treatment and disposal if radionuclide separation is used compared with the estimated costs if it is not used.
D.	Provide the assumptions underlying such estimates of waste volumes and cost estimates.
E.	Provide characterization methodologies for determining waste type.
F.	Submit a plan for treating or managing hazardous waste residues, accompanied by a NMED permit application.

2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment

In lieu of plans to treat mixed-waste on-site, DOE may treat waste at an off-site facility (at a commercial or non-commercial mixed waste treatment facility), or DOE may recycle waste at an off-site facility. Should DOE elect to use off-site recycling facilities in lieu of (or in combination with) treatment, it will follow the requirements prescribed in this Section in the same manner as if the waste was being shipped off-site for treatment. Any and all requirements

imposed by the off-site treatment/recycling facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment/recycling site shall be met by Respondents.

DOE shall notify the NMED Project Manager in writing as soon as possible if mixed waste is planned to be sent to a non-commercial facility. Notification should be made if possible when DOE is first considering such an option to allow NMED and the state to address any state issues or concerns with other states. The NMED Project Manager shall approve in writing the proposed off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility. Activities for mixed waste to be shipped off-site for treatment/recycling at a non-commercial facility are identified in Table V.

Should DOE decide to treat or recycle waste at a commercial off-site facility, DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility.

Table IV. Activities for Mixed Waste to be Shipped Off-Site for Treatment or Recycling at a Commercial facility

A.	Meet all regulatory requirements for off-site shipment.
B.	Provide documentation to NMED that waste has been received at an off-site facility for treatment or recycling within 45 working days of receipt of waste at the treatment facility.

2.1.4.1 Specific Site Requirements for Non-commercial Treatment Facilities

Shipment to Idaho National Engineering Laboratory

Prior to shipment, Idaho National Engineering Laboratory and Idaho Division of Environmental Quality shall be notified of any pending shipments of waste prior to shipment should DOE ship mixed low-level waste to INEL. Proper procedures including additional approvals (if necessary) and documentation shall be completed prior to the shipment of wastes to INEL. Management of post-treatment waste residuals or newly generated waste streams will be in accordance with the requirements of DOE, the State of Idaho and that state where they will be disposed. A modification to LANL's RCRA permit providing for the return of such wastes and/or residues to LANL must be approved by NMED prior to any such return of wastes and/or residuals to LANL. DOE will notify the NMED Project Manager in writing as soon as possible, and in any

event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams from INEL.

Shipments of low-level mixed wastes to planned facilities (not yet existing) will occur only after that treatment and schedules are approved by DOE-ID and the State of Idaho. Upon approval of the planned treatment facilities, the applicable protocol from the paragraph above will be implemented for mixed wastes to be treated at planned facilities.

Shipment to Oak Ridge Reservation

In the case that Oak Ridge Reservation (ORR) may not dispose of mixed-waste residues or new waste streams generated from off-site treatment, and they cannot be sent to another facility for disposal, then the residues may return to LANL. Should residual or newly generated waste streams be returned to LANL, the proper permits for the State of New Mexico must exist. DOE will notify the NMED Project Manager in writing as soon as possible, and in any event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams from ORR.

Table V. Activities for Mixed Waste to be Shipped Off-Site for Treatment or Recycling at a Non-commercial facility

A.	Request necessary approval from NMED for shipment of waste by category before shipping.
B.	Meet all regulatory requirements for off-site shipment.
C.	Provide documentation to NMED of confirmation of shipment date within 14 working days prior to sending waste to an off-site facility for treatment, disposal, or recycling, or storage pending treatment, disposal, or recycling.
D.	Provide documentation to NMED that waste has been received at an off-site facility for treatment within 45 working days of receipt of waste at the off-site facility.
E.	Meet all regulatory requirements to include RCRA Permit modifications for residual or newly generated waste streams after treatment or recycling.
F.	Provide documentation to NMED within 30 working days after receipt of residual or newly generated waste streams upon return to LANL.

2.1.5 Plans Related to Other Mixed Waste Activities

1. Activities other than the types of activities specifically called for in the FFC Act as requiring schedules are described in this STP. Some of these activities may be associated

with schedules which may contain compliance dates related to treatment of the DOE's mixed waste.

2. For mixed waste which is not sufficiently characterized to allow identification of appropriate treatment, notification of the characterization of such waste shall be in accordance with the annual update process described in the Compliance Order. If such characterization results in the addition or deletion of a treatability group or an increase in volume in a treatability group, a revision would be required pursuant to Section X of the Compliance Order.

3.0 LOW-LEVEL MIXED WASTE STREAMS

This Chapter presents proposed schedules for treatment technologies and the preferred options to treat low-level mixed waste streams (MLW or LLMW) at LANL. All preferred options not described below must be approved by NMED in accordance with the revision process pursuant to the Compliance Order.

The original October 4, 1995 STP inventory in each MLLW treatability group has been modified through the revision process in the FFCO. The table in CPV Appendix B provides a comprehensive summary of changes to the CPV covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of this revision. In Appendix B, the original STP inventory in each MLLW treatability group is denoted as subgroup 0 of that treatability group (e.g., the original volume of STP treatability group LA-W906 became LA-W906-0). Each revision that has since added volumes to individual treatability groups has resulted in creation of an additional subgroup, having the same number as the revision (e.g., LA-W906-4 was created in Revision 4.0, and LA-W906-5 was created in Revision 5.0).

In most Sections of this chapter, the subgroups of the treatability groups are not shown. In those cases, the Activities and Compliance Dates are applicable to the entire net volume of that treatability group. However, when subgroups of a treatability group have been assigned Activities and Compliance Dates unique to that subgroup, those subgroups are detailed in the text. For a complete listing of volumes by subgroup for all treatability groups, please refer to Appendix B.

3.1 Mixed Waste Streams for Which Technology Exists

The following subsections summarize LLMW treatability groups for which technology exists.

3.1.1 Off-site Treatment by Thermal Treatment

Treatability Group(s):

LLMW for Thermal Treatment (MWIR Treatment ID DS-S001)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
IPA wastes	LA-W901	D001, D009, F002, F003, F005	0	0.00
scintillation fluids	LA-W902	D001, F003, F005	0	0.00
Totals			**0**	**0.00**

Treatment Technology:

The waste will be treated at an off-site facility that combusts organic liquid waste. Should DOE decide to treat waste at an off-site non-commercial facility, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	9/30/96
B. Complete shipping waste	12/30/96
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.2 Off-site Treatment by Stabilization or Macroencapsulation

Treatability Group(s):

LLMW for Stabilization

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (M^3)
lead blankets	LA-W903	D007, D008	0	0.00
soil with heavy metals	LA-W904	D004, D005, D006, D007, D008, D009, D010, D011	3	0.45
ER soils	LA-W905	D028, D029, F001, F005 D010, D011	0	0.00
Totals			3	0.45

Treatment Technology:

The waste will be treated at an off-site facility that stabilizes or macroencapsulates wastes. Should DOE decide to treat waste at an off-site non-commercial facility, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	05/30/97
B. Complete shipping waste	12/30/98
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.3 Evaporative Oxidation (MWIR Treatment ID GJ-S801C)

Treatability Group(s):

LLMW for Evaporative Oxidation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906-0 LA-W906-4 LA-W906-5	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D030, D032, D033, D034, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	173	10.32
Totals			**173**	**10.32**

Note: See below for additional wastes in this treatability group

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site treatment facility (commercial or non-commercial) and state regulatory, federal regulatory or other regulatory requirements applicable

at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	12/30/96
B. Initiate construction	As specified in the NMED permit.
C. Complete system test and commence operation and begin treating mixed waste	6/19/99
D. Complete treatment of existing wastes to applicable regulatory standards, or	2/09/00
E. Complete shipment of existing wastes for treatment to an off- site facility.	2/09/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes

The following additional wastes will require management in this category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906-6	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D030, D032, D033, D034, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	88	5.74
Totals			**88**	**5.74**

Activities for wastes belonging to this treatability subgroup.

Activity	Compliance Dates
G. Complete shipment of existing wastes for treatment to an off- site facility.	2/09/03
H. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.4 Thermal Desorption (MWIR Treatment ID GJ-S801B)

LLMW for Thermal Desorption/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
organic-contaminated combustible solids	LA-W911	D001, D004, D008, D009, F001, F002, F003, F005	381	36.07
Totals			**381**	**36.07**

LLMW for Thermal Desorption

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
organic-contaminated noncombustible solids	LA-W919	D001, D003, D004, D005, D006, D007, D008, D009, D010, D011, D012, D015, D018, D019, D020, D022, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D042, D043, F001, F002, F003, F004, F005	227	27.31
Totals			**227**	**27.31**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	11/16/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	02/01/01
D. Complete treatment of existing wastes to applicable regulatory standards, or	02/14/02
E. Complete shipping of existing wastes to an off-site treatment facility.	02/14/02
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.5 Macroencapsulation (MWIR Treatment ID PX-S803)

Treatability Group(s):

LLMW for Macroencapsulation/Off-site treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
combustible debris	LA-W912	D001, D002, D003, D005, D006, D007, D008, D009, D011, D035, F001, F002, F003, F005	103	15.17
Totals			**103**	**15.17**

LLMW for Macroencapsulation

Treatability group		RCRA codes	Number of items	Net volume (m^3)
activated or inseparable lead	LA-W921	D008	34	7.09
noncombustible debris	LA-W922	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011	191	36.46
Totals			**225**	**43.55**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/04/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operation and begin treating mixed waste	02/01/00
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/25/00
E. Complete shipping of existing wastes to an off-site treatment facility.	08/25/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.6 Chemical Plating Waste Treatment Skid (MWIR Treatment ID LA-S004)

Treatability Group(s):

LLMW for Chemical Plating Waste Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous wastes with heavy metals	LA-W913	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011	139	3.07
corrosive solutions	LA-W914	D001, D002	197	1.21
aqueous cyanides, nitrates, chromates, and arsenates	LA-W915	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, F007, P029, P098	23	0.17
Totals			**359**	**4.45**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the

affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Resubmit revised permit application to NMED	10/30/96
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	03/17/00
D. Complete treatment of existing wastes to applicable regulatory standards, or	05/08/01
E. Complete shipping of existing wastes to an off-site treatment facility.	05/08/01
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.7 Water-reactive Metals Treatment Skid (MWIR Treatment ID LA-S003)

Treatability Group(s):

LLMW for Water-Reactive Metals Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
water-reactive wastes	LA-W916	D001, D003, D004, D005, D007, D008, D010, D011	113	7.05
Totals			**113**	**7.05**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	06/30/01
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	09/09/03
D. Complete treatment of existing wastes to applicable regulatory standards, or	04/21/04
E. Complete shipping of existing wastes to an off-site treatment facility.	04/21/04
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.8 Gas-scrubbing Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas-Scrubbing Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
compressed gases requiring scrubbing	LA-W917	D001, D002, P056	13	0.35
Totals			**13**	**0.35**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/28/03
E. Complete shipping of existing wastes to an off- site treatment facility.	08/28/03
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.9 Gas Oxidation Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas Oxidation Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
compressed gases requiring oxidation	LA-W918	D001, U226	177	1.32
Totals			**177**	**1.32**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/28/03
E. Complete shipping of existing wastes to an off-site treatment facility.	08/28/03
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.10 Mercury Amalgamation (MWIR Treatment ID PI-S801)

Treatability Group(s):

LLMW for Amalgamation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
elemental mercury	LA-W920	D006, D009, F005	79	0.66
Totals			**79**	**0.66**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/30/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	06/05/00
D. Complete treatment of existing waste to applicable regulatory standards, or	11/15/00
E. Complete shipping of existing wastes to an off-site treatment facility.	11/15/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.2 Mixed Waste Streams for Which Technology Requires Adaptation or for Which No Technology Exists

The following subsections summarize mixed waste streams for which technology requires adaptation or for which no technology exists.

3.2.1 Hydrothermal Processing

Treatability Group(s):

LLMW for Hydrothermal Processing/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
halogenated organic liquids	LA-W907	D001, D002, D003, D007, D009, D010, D011, D018, D019, D022, D028, D029, D035, D043, F001, F002, F003, F004, F005, U077, U080, U226, U227, U228, U236	525	18.26
nonhalogenated organic liquids	LA-W908	D001, D002, D003, D004, D007, D008, D009, D011, D018, D038, D040, F002, F003, F004, F005, U002, U019, U154, U169, U188, U220, U246	843	20.20
bulk oils	LA-W909	D002, D004, D005, D006, D007, D008, D009, D010, D011, D021, D027, D039, F001, F002, F003, F005	45	5.81
PCB wastes with RCRA components	LA-W910	D004, D005, D006, D007, D008, D009, D010, D011, D012, D015, D019, D027, D028, D030, D031, D032, D033, D034, D036, D039, D042, D043, F002, F003, F004, F005	40	2.75
Totals			**1453**	**47.02**

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
Liquid and solid oxidizers	LA-W923	D001, D003, D005	93	1.37
Totals			**93**	**1.37**

Treatment Technology:

The preferred destruction treatment technology option for this treatability group is Hydrothermal Processing which is a technology that needs development for adaptation to treat radioactive and PCB-bearing waste. This treatment technology is being adapted at LANL and is expected to be developed into a mobile treatment unit. The GJPO schedule for deployment of the unit indicates its possible availability to LANL after February 2002. Shipment off-site for treatment is a parallel preferred option. Respondents shall submit treatment or off-site shipment schedules and

options for NMED's approval by November 30, 1998. Treatment or other options other than off-site shipment shall be carried out pursuant to the revision process. Off-site shipments must be completed by February 2002.

Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

3.3 Mixed Waste Requiring Further Characterization or for Which Technology Assessment Has Not Been Done (MWIR Treatment ID LA-S701)

Treatability Group(s):

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
lead wastes - TBD	LA-W924	D003, D008	129	40.16
mercury wastes - TBD	LA-W925-0	D007, D008, D009, F001	63	18.30
compressed gases - TBD	LA-W926	D001, D007, D009, D022, P056, U080, U226	10	1.25
biochemical laboratory wastes	LA-W927	D001, D003	9	1.34
dewatered treatment sludge	LA-W928	see Subsection 3.3 in the Background Volume	61	12.71
Totals			**272**	**73.76**

Note: See below for additional wastes in some of these treatability groups

Treatment Technology:

The following steps will be taken to properly characterize this waste:

- Conduct additional generator interviews
- Prepare a sampling plan for waste not adequately characterized

- Conduct sampling and analysis
- Determine treatment options

Activities for wastes originally belonging to these treatability groups as listed above.

Activity	Compliance Dates
A. Complete generator interviews	10/30/95
B. Complete sampling and analysis plan	1/30/96
C. Complete sampling and analysis	9/30/98
D. Complete determination of treatment options	12/20/98
E. Complete shipping of existing wastes to an off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups.	12/20/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes and treatability groups:

The following additional wastes will require management in this category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	RCRA Codes	Number of items	Net volume (m3)
mercury wastes-TBD	LA-W925-4 LA-W925-5 LA-W925-6	D003, D007, D008, D009, F001, F002, F005	74	2.61
~~mercury wastes-TBD~~	~~LA-W925-5~~	~~D007, D008, D009, F001~~	~~14~~	~~1.52~~
explosives	LA-W932	D003	1	0.000001
labpacks	LA-W933	D001, D002, D003, D004, D005, D006, D007, D008, D010, F003, F005, D011, P012, P029, P098, P106, P113, P120, U131, U144, U145, U188, U190, U204, U216, U219	149	0.30
Totals			**224**	**2.91**

Activities for wastes belonging to these treatability groups and subgroups.

Activity	Compliance Dates
G. Complete sampling and analysis plan	1/30/99
H. Complete sampling and analysis	9/30/01
I. Complete determination of treatment options	12/20/01
J. Complete shipping of wastes to an off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups	12/20/03
K. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at off-site facility

3.4 Plans for Other Types of Activities

The following subsection summarizes plans for other types of activities.

3.4.1 Lead Decontamination (MWIR Treatment ID LA-S001)/Off-site Treatment (preferred option)

Treatability Group(s):

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net volume (m^3)	No. Items	Net volume (m^3)	No. Items	Net volume (m^3)
lead for surface contamination	LA-W930-0 LA-W930-5	0	0.00	134	49.19	134	49.19
Totals		**0**	**0.00**	**134**	**49.19**	**134**	**49.19**

Note: See below for additional wastes in this treatability group

Treatment Technology:

This treatability group contains two categories of lead for decontamination:

The first category is lead in the original LA-W930-0 inventory that is amenable to decontamination in the on-site lead decontamination trailer, which was designed to decontaminate simple lead shapes, such as lead bricks, of certain physical dimensions. The trailer is on-site and has operated, but needs an upgrade for prolonged operation.

The lead in the second category is lead in the original LA-W930-0 inventory that is not amenable to decontamination in the on-site lead decontamination trailer, plus subsequent additions to the original inventory shown in Appendix B. This lead will be processed using other on-site decontamination processes, such as dry sandblasting or hand-scrubbing, or sent to off-site lead decontamination services.

Any lead not acceptable for on-site or off-site lead decontamination, plus any lead unsuccessfully decontaminated, will be designated for treatment and disposal at an off-site

facility, or for recycle through an off-site capability, such as metal melting to create shielding blocks or a DOE lead bank. Non-conforming items will be reassigned to appropriate treatability groups in accordance with the FFCO.

Should DOE decide to treat or recycle waste at an off-site non-commercial facility in lieu of plans to treat or recycle such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment/recycle option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment/ recycling facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment/recycling site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility.

Lead shapes and forms in the first category.

Activity	Compliance Date
A. Complete lead decontamination	09/30/97

Lead shapes and forms in the second category.

Activity	Compliance Date
A. Provide schedule for development of lead processing techniques and options	06/30/96
B. Segregate lead waste into decontamination groupings	07/31/97
C. Complete shipment of wastes to decontamination operations, or	12/02/98
D. Determine treatment/disposal or other recycle options for lead waste not acceptable for decontamination	12/02/98
E. Complete treatment/disposal operations or other recycle operations for lead waste not acceptable for decontamination	07/31/99
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes

The following additional wastes will require management in the second category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net volume (m^3)	No. Items	Net volume (m^3)	No. Items	Net volume (m^3)
lead for surface contamination	LA-W930-6	0	0.00	14	12.06	14	12.06
Totals		**0**	**0.00**	**14**	**12.06**	**14**	**12.06**

Activities for wastes belonging to this treatability subgroup.

Activity	Compliance Date
G. Complete shipment of wastes to decontamination operations, or	12/02/99
H. Determine treatment/disposal or other recycle options for lead waste not acceptable for decontamination	12/02/99
I. Complete treatment/disposal operations or other recycle operations for lead waste not acceptable for decontamination	07/31/00
J. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.4.2 Sorting, Surveying, and Decontamination (MWIR Treatment ID GJ-S804)

Treatability Group(s):

Treatability group	MWIR waste ID	Number of items	Net volume (m^3)
1. nonradioactive or suspect waste items to be surveyed	LA-W929-0(1)	0	0.0
2. nonradioactive or suspect waste items to receive RCRA and radiological characterization	LA-W929-0(2)	0	0.00
3. nonradioactive or suspect waste items that cannot or should not be sampled	LA-W929-0(3)	0	0.0
Totals		**0**	**0.00**

Note: See below for additional wastes in this treatability group

Treatment Technology:

The waste items in part 1 of the original volume in this treatability group will be surveyed using a field operation that will survey waste suspect of radioactive contamination to determine whether it is radioactively contaminated. The work will be done on-site with equipment and staffing provided by LANL or another DOE site. Waste determined not to be radioactively contaminated will be treated using commercial facilities permitted to treat hazardous waste; waste determined to be radioactively contaminated will be assigned to applicable treatability groups and/or sent to offsite facilities for appropriate treatment.

Waste items in part 2 of this treatability group will be surveyed using complete RCRA and radiological sampling and characterization. Waste sampled under this alternative will be treated and disposed as low-level mixed waste; the waste will be assigned to applicable treatability groups and/or sent to off-site facilities for appropriate treatment based on the results of this characterization.

Sampling for this characterization alternative will be conducted in accordance with RCRA SW-846 methods. To ensure an adequate volume of waste material is available for sampling and to maximize the cost effectiveness of the sampling activities, some lab packed and other waste items may be bulked into larger volume containers; all RCRA waste codes will be transferred to the bulked wastes to ensure correct RCRA categorization is maintained. It may be found, when preparing a given drum for sampling, (for example, solid small volume waste items that cannot be sampled in accordance with EPA SW-846 methods) are in fact not amenable to sampling and should have been included in the item count for group 3 . If visual inspection so indicates, these waste items will be transferred to Group 3 and assigned to applicable treatability groups based on existing knowledge.

Waste items in part 3 of this treatability group which are confirmed not amenable to sampling (e.g., lead-acid batteries, spray paint cans) will be assigned to applicable treatability groups based on existing knowledge. It may be found, when inspecting a given drum, that some items can in fact be sampled in accordance with EPA SW-846 methods and should have been included in the item count for Group 2. If visual inspection so indicates, these waste items will be transferred to Group 2 and sampled accordingly.

Additional compliance dates will be proposed for any waste items in this treatability group found not to have available treatment/disposal options following a complete review of all survey, analytical, or visual inspection data obtained through these processes.

For all waste items in this treatability group, shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within (45) working days of receipt of waste at the treatment facility.

Activities for waste items in part 1 of this treatability group.

Activity	Compliance Dates
A. Complete field survey	10/30/96
B. Submit documentation declaring waste items as nonradioactive, or submit documentation assigning waste items to applicable treatability groups	2/28/97
C. Propose additional compliance dates if necessary	4/30/97

Activities for waste items in part 2 of this treatability group.

Activity	Compliance Dates
D. Complete RCRA and radiological sampling	1/28/97
E. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	2/28/97
F. Propose additional compliance dates if necessary	4/30/97

Activities for waste items in part 3 of this treatability group.

Activity	Compliance Dates
G. Complete visual verification	1/28/97
H. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	6/30/97
I. Propose additional compliance dates if necessary	9/30/97

Additional wastes:

Treatability group	MWIR waste ID	Number of items	Net volume (m^3)
Nonradioactive or suspect waste items	LA-W929-5	0	0.00
Totals		**0**	**0.00**

Activities for items added as subgroup 5 of this treatability group.

Activity	Compliance Dates
J. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	3/31/98
K. Propose additional Compliance Dates if necessary	3/31/98

3.5 Management of "Missing" Items.

Waste Category:

Category	MWIR waste ID	No. Items	Net volume (m^3)
Missing/nonexistent/TBV	None	48	8.81
Totals		**48**	**8.81**

Treatment Technology:

During visual inspections and sampling activities in support of STP waste work-off, occasionally an item cannot be found, or it is not located in the containers in which it is expected to be, according to the LANL data files for the waste item. In some instances, such items could not be verified as having ever been received in storage at LANL, and further follow-up investigations of the record files revealed that for various reasons, the waste items were never in fact generated, although on paper they were included in the original STP inventory.

In these instances, DOE and UC, and their contractors, perform a thorough inspection of both the physical inventories and the data files. When DOE and UC determine that an STP covered waste item does not exist, transfer of the item to the category called *"Missing/ nonexistent/TBV* (to be verified)", is requested through the revision process associated with the next *Annual Update.*

DOE and UC will re-verify the absence of all *"Missing/ nonexistent/TBV"* items container-by-container, as each STP waste item is being sampled, repackaged, or otherwise prepared for on- or off-site treatment. The final verification that all *"Missing/ nonexistent/TBV"* items do not in fact exist will be completed by April 21, 2004, at which time all remaining MLLW items in the original STP inventory will have been treated. At that time, DOE and UC will request deletion of all items having been fully verified as missing or nonexistent.

At any time during the re-verification process, should any of these items be discovered to exist, NMED will be notified, and approval will be requested for assignment of the rediscovered items to the appropriate TG. If necessary, they will be assigned new Activities and Compliance Dates, in accordance with the terms of the FFCO.

The following steps will be taken to verify presence or absence of this waste:

Activity	Compliance Dates
A. Initiate re-verification process on a shipment-by-shipment basis	01/03/98
B. Complete re-verification process	04/21/04
C. Re-assign any existing items to appropriate treatability groups	04/21/04
D. Complete treatment of existing wastes to applicable regulatory standards, or	10/30/04
E. Complete shipping of existing wastes to an off-site treatment facility	10/30/04
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

4.0 MIXED TRANSURANIC WASTE

Treatment Group(s):

Assorted Mixed Transuranic Waste

Treatment Technology

Respondents are required to develop treatment technologies and treat mixed transuranic (MTRU) waste at LANL according to the schedule set forth below:

Activity	Compliance Date
A. Development of treatment technologies	June 30, 1999
B. Submit permit application amendment or modification to NMED for treatment of MTRU	December 31, 1999
C. Begin treating MTRU	Six (6) months after NMED permit issuance
D. Complete treatment of existing MTRU to applicable regulatory standards	December 31, 2010

The above schedule is not based on the assumption that WIPP will be a disposal option or that DOE will receive a variance from treatment standards for land disposal of MTRU waste to be disposed at WIPP. All revisions to compliance dates shall be in accordance with the procedures set forth in the compliance order.

CPV APPENDIX A
HISTORY OF STP REVISIONS AND AMENDMENTS

As discussed in CPV Section 1.3, the STP Compliance Plan Volume has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order, as amended and revised. This Appendix provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

To date, there have been six revisions and two amendments to the CPV. In addition, the FFCO was amended once, on May 20, 1997. The following Table A-1 provides a summary of these changes. More detailed descriptions can be found in the CPV Update portion of each year's STP *Annual Update,* and the original correspondence requesting each change.

Table A-1. SUMMARY OF CHANGES TO THE CPV AND THE FFCO

Action	Document Modified	Effective Date	Effect on FFCO/STP
Rev. 1.0	STP/CPV	6/12/96	Added off-site treatment as a parallel preferred option for most MLLW treatability groups
Rev. 2.0	STP/CPV	12/9/96	Reduced volume of LA-W928 by approving reclassification of sludges as LLW
Amendment 1.0	STP/CPV	10/30/96	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Rev. 3.0	STP/CPV	1/27/97	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Amendment 1.0	FFCO	5/20/97	Modified FFCO Sections IV, V, IX, and X to streamline waste transfers and deletions
Amendment 2.0	STP/CPV	9/4/97	Extended CPV Activity 3.1.2B Compliance Date to 12/29/97
Rev. 4.0	STP/CPV	*12/29/97*	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added treatability groups, and deleted treated items
Rev. 5.0	STP/CPV	*12/29/97*	Added volumes reported in FY95 and FY96 *Annual Updates* (and certain other items) to several treatability groups, added Activities and Compliance Dates, added CPV Appendices, and deleted treated items
Rev. 6.0	STP/CPV	*(to be added)*	Added volumes reported in FY97 *Annual Update* to several treatability groups, added certain Activities and Compliance Dates, adjusted several original inventory volumes, transferred one LA-W929 item to a new treatability group, and deleted treated items

CPV APPENDIX B
SUMMARY OF CPV INVENTORY CHANGES

The following tables provide a comprehensive summary of changes to the CPV covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of this revision. The volumes given in the tables reflect changes to the individual MLLW treatability group volumes due to increases or decreases, as noted. Table B-1 reports the inventory changes arising from Revision 6.0, while Table B-2 reports the inventory changes previously approved.

Key to Reading the Subgroups

The original STP inventory in each MLLW treatability group is now denoted as subgroup -0 of that treatability group (e.g., the original volume of STP treatability group LA-W906 became LA-W906-0). The original October 4, 1995 STP inventory in each MLLW treatability group has been modified through the revision process in the FFCO. The following revisions have affected volumes in individual treatability groups to date:

Revision	Effect on Volumes
Rev. 2.0	Reduced volume of LA-W928
Rev. 3.0	Divided original volume of LA-W929 into three subgroups
Rev. 4.0	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added new treatability groups
Rev. 5.0	Increased and decreased volumes in several treatability groups
Rev. 6.0	Increased and decreased volumes in several treatability groups, transferred the volume in LA-W929-5 to another treatability group

Each revision that has added volumes to individual treatability groups has resulted in creation of an additional subgroup of that treatability group, having the same number as the revision (e.g., LA-W906-4 was created in Revision 4.0, and LA-W906-5 was created in Revision 5.0).

Additions and Deletions to Date

To date, MLLW inventory increases and decreases have been incorporated into the covered waste inventories through Revisions 2.0, 4.0, 5.0, and 6.0. Revision 2.0 incorporated decreases in treatability group LA-W928 due to deletion of covered waste items. Rev. 4.0 resulted in decreases to LA-W929 and increases in other TGs, primarily by transferring LA-W929 items to other TGs. Rev. 5.0 and 6.0 resulted in both additions to and deletions of covered waste volumes (i.e., increases and decreases) in a number of TGs. Therefore, the Appendix B tables that follow show that subgroups -4, -5, and -6 exist for some treatability groups, but not for all.

These tables provide a master list of MLLW inventory changes presented in the *Annual Updates,* to enable users of the STP to track all changes in the LANL MLLW covered waste inventory that occurred since the original STP inventory was established in the October 4, 1995 FFCO/CPV.

Changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY97. However, only those reported as of Rev. 6.0 are included in this table. All others will be reported in the next *Annual Update* and associated revision request. Therefore, the *"Net Covered Waste Inventory"* may not fully reflect the actual CPV covered waste inventory as of the date of this revision, in some instances.

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.1	IPA Wastes	LA-W901-0	7	0.02	Decrease 7	Decrease 0.02			0	0.00	0	0.00
3.1.1	Scintillation Fluids	LA-W902-0	1	0.0038	Decrease 1	Decrease 0.0038			0	0.00	0	0.00
3.1.2	Lead Blankets	LA-W903-0	0	0.00					0	0.00	0	0.00
3.1.2	Soil with Heavy Metals	LA-W904-0	58	~~10.33~~ 10.43[a]	Decrease 6 Decrease 2 Decrease 46 Decrease 2	Decrease 0.62[b] Decrease 0.42[c] Decrease 8.91 Decrease 0.14			2	0.34		
		LA-W904-5	1	0.11					1	0.11	3	0.45
3.1.2	ER Soils	LA-W905-0	0	0.00					0	0.00	0	0.00

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.3	Aqueous Organic Liquids	LA-W906-0	45	1.65					45	1.65		
		LA-W906-4	27	0.36					27	0.36		
		LA-W906-5	101	~~8.88~~ 8.31[d]					101	8.31		
		LA-W906-6	0	0.00	Increase 88	Increase 5.74			88	5.74	261	16.06
3.1.4	Organic-Contaminated Combustible Solids	LA-W911-0	305	28.10	Increase 2	Increase 0.42[c]			307	28.52		
		LA-W911-4	33	0.68					33	0.68		
		LA-W911-5	40	6.87					40	6.87		
		LA-W911-6	0	0.00	Increase 1	Increase 0.0038			1	0.0038	381	36.07
3.1.4	Organic-Contaminated Noncombus-tible Solids	LA-W919-0	79	7.71	Increase 1	Increase 0.11[e]			80	7.82		
		LA-W919-4	9	0.38					9	0.38		
		LA-W919-5	89	10.53					89	10.53		
		LA-W919-6	0	0.00	Increase 49	Increase 8.58			49	8.58	227	27.31

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.5	Combustible Debris	LA-W912-0	83	13.82					83	13.82		
		LA-W912-4	9	0.75					9	0.75		
		LA-W912-5	5	0.28					5	0.28		
		LA-W912-6	0	0.00	Increase 6	Increase 0.32			6	0.32	103	15.17
3.1.5	Activated or Inseparable Lead	LA-W921-0	14	4.77	Decrease 1 Decrease 2	Decrease 0.06[f] Decrease 1.72			11	2.99		
		LA-W921-5	18	3.35	Decrease 4	Decrease 0.83[f]			14	2.52		
		LA-W921-6	0	0.00	Increase 9	Increase 1.58			9	1.58	34	7.09
3.15	Non-combustible Debris	LA-W922-0	41	5.62	Decrease 14	Decrease 2.915			27	2.71		
		LA-W922-4	53	2.83					53	2.83		
		LA-W922-5	63	22.29	Decrease 3	Decrease 0.62			60	21.67		
		LA-W922-6	0	0.00	Increase 51	Increase 9.25			51	9.25	191	36.46

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.6	Aqueous Wastes with Heavy Metals	LA-W913-0	83	1.50					83	1.50		
		LA-W913-4	25	0.40					25	0.40		
		LA-W913-5	11	0.15					11	0.15		
		LA-W913-6	0	0.00	Increase 20	Increase 1.02			20	1.02	139	3.07
3.1.6	Corrosive Solutions	LA-W914-0	60	0.69					60	0.69		
		LA-W914-4	90	0.36					90	0.36		
		LA-W914-5	39	0.12					39	0.12		
		LA-W914-6	0	0.00	Increase 8	Increase 0.04			8	0.04	197	1.21
3.1.6	Aqueous Cyanides, Nitrates, Chromates, and Arsenates	LA-W915-0	9	0.13					9	0.13		
		LA-W915-4	3	0.002					3	0.002		
		LA-W915-5	11	0.04					11	0.04	23	0.17
3.1.7	Water-Reactive Wastes	LA-W916-0	78	6.03					78	6.03		
		LA-W916-4	26	0.31					26	0.31		
		LA-W916-5	4	0.03					4	0.03		
		LA-W916-6	0	0.00	Increase 5	Increase 0.68			5	0.68	113	7.05
3.1.8	Compressed Gases Requiring Scrubbing	LA-W917-0	13	0.35					13	0.35	13	0.35

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.9	Compressed Gases Requiring Oxidation	LA-W918-0	6	0.08					6	0.08		
		LA-W918-4	168	1.23					168	1.23		
		LA-W918-5	2	0.01					2	0.01		
		LA-W918-6	0	0.00	Increase 1	Increase 0.0002			1	0.0002	177	1.32
3.1.10	Elemental Mercury	LA-W920-0	45	0.50					45	0.50		
		LA-W920-4	20	0.02					20	0.02		
		LA-W920-5	9	0.02					9	0.02		
		LA-W920-6	0	0.00	Increase 5	Increase 0.12			5	0.12	79	0.66
3.2.1	Halogenated Organic Liquids	LA-W907-0	384	16.58	Decrease 3	Decrease 0.0076			381	16.57		
		LA-W907-4	97	1.05					97	1.05		
		LA-W907-5	31	0.49					31	0.49		
		LA-W907-6	0	0.00	Increase 16	Increase 0.15			16	0.15	525	18.26

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Nonhalogen-ated Organic Liquids	LA-W908-0	275	14.34	Increase 0[g] Decrease 4 Decrease 0[h]	Increase 0.076 Decrease 0.49 Decrease 0.11			271	13.82		
		LA-W908-4	409	3.38					409	3.38		
		LA-W908-5	130	2.91					130	2.91		
		LA-W908-6	0	0.00	Increase 33	Increase 0.09			33	0.09	843	20.20
3.2.1	Bulk Oils	LA-W909-0	28	3.75	Increase 0[i] Decrease 23	Increase 0.47 Decrease 2.22			5	2.00		
		LA-W909-4	8	1.48					8	1.48		
		LA-W909-5	28	2.28					28	2.28		
		LA-W909-6	0	0.00	Increase 4	Increase 0.05			4	0.05	45	5.81
3.2.1	PCB Wastes with RCRA Components	LA-W910-0	4	0.74	Increase 6	Increase 0.62[b]			10	1.36		
		LA-W910-6	0	0.00	Increase 30	Increase 1.39			30	1.39	40	2.75

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Liquid and Solid Oxidizers	LA-W923-0	6	0.117					6	0.117		
		LA-W923-4	67	0.145					67	0.145		
		LA-W923-5	13	0.317					13	0.317		
		LA-W923-6	0	0.00	Increase 7	Increase 0.795			7	0.795	93	1.37
3.3	Lead Waste - TBD	LA-W924-0	129	40.16					129	40.16	129	40.16
3.3	Mercury Wastes - TBD	LA-W925-0	63	18.30					63	18.30		
		LA-W925-4	37	0.42					37	0.42		
		LA-W925-5	14	1.52					14	1.52		
		LA-W925-6	0	0.00	Increase 23	Increase 0.67			23	0.67	137	20.91
3.3	Compressed Gases - TBD	LA-W926-0	10	1.25					10	1.25	10	1.25
3.3	Biochemical Laboratory Wastes	LA-W927-0	9	1.34					9	1.34	9	1.34
3.3	Dewatered Treatment Sludge	LA-W928-0	61	12.71					61	12.71	61	12.71
3.3	Explosives	LA-W932-0	0	0.00					0	0.00		
		LA-W932-4	1	0.000001					1	0.000001	1	0.000001

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Lab Packs	LA-W933-0	0	0.00					0	0.00		
		LA-W933-4	114	0.17					114	0.17		
		LA-W933-5	28	0.13					28	0.13		
		LA-W933-6	0	0.00	Increase 6	Increase 0.003	Increase 1	Increase 0.00002[j]	7	0.003	149	0.30
3.4.1	Lead for Surface Decontamin-ation	LA-W930-0	36	33.43	Decrease 1 Decrease 4 Decrease 6 Decrease 2	Decrease 0.11[k] Decrease 0.35[k] Decrease 1.04 Decrease 5.66			23	26.27		
		LA-W930-5	115	23.75	Decrease 1 Decrease 3	Decrease 0.21[k] Decrease 0.62[k]			111	22.92		
		LA-W930-6	0	0.00	Increase 14	Increase 12.06			14	12.06	148	61.25

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.4.2	Nonradioactive or Suspect Waste Items to be Surveyed	LA-W929-0	2	0.0076	Decrease 2	Decrease 0.0076			0	0.00		
		LA-W929-5	1	0.00002			Decrease 1	Decrease 0.00002[j]	0	0.00	0	0.00
None[l]	Lead Requiring Sorting	LA-W931-0	23	4.76	Decrease 23 Increase 0[m]	Decrease 4.78 Increase 0.02			0	0.00		
		LA-W931-5	8	0.44					8	0.44		
		LA-W931-6	0	0.00	Increase 4	Increase 0.64			4	0.64	12	1.08
None[n]	IPA	None	0	0.00	Increase 1 Decrease 1	Increase 0.0005[n] Decrease 0.0005[n]			0	0.00	0	0.00

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Category	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)			Items	Volume (m^3)	Items	Volume (m^3)
3.5	Missing/ nonexistent/ TBV	NONE (Revision 5)	48	8.81					48	8.81	48	8.81

NOTES:

[a] This correction in LA-W904 volume arises from an error in the Appendix B in Revision 4/5 as discussed in Revision 6.0.
[b] This transfer of LA-W904 waste to LA-W910 was approved by NMED on September 18, 1997 as discussed in Revision 6.0
[c] This transfer of LA-W904 waste to LA-W911 was approved by NMED on September 18, 1997 as discussed in Revision 6.0
[d] This correction in LA-W906 volume arises from an error in the Appendix B in Revision 4/5 as discussed in Revision 6.0.
[e] The volume increase arises from the return of unused treatability study sample. It has been returned to the original inventory of LA-W919 (subgroup -0) consistent with the inventory subgroup from which the sample was removed.
[f] These 5 items in subgroups LA-W921-0 and -5 (0.89 m^3 total) were shipped on December 9, 1996 as discussed in DOE's letter dated December 24, 1996.
[g] This increase in LA-W908 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[h] This decrease in LA-W908 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[i] This correction in LA-W909 volume arises from an error in Appendix B in Revision 4/5 as discussed in Revision 6.0.
[j] This transfer of LA-W929 waste to LA-W933 is discussed in Revision 6.0.
[k] The shipment of 0.32 m^3, as reported in the FY97 STP *Annual Update*, consisted of 1 item (0.11 m^3) from subgroup LA-W930-0 and 1 item (0.21 m^3) from subgroup -5. The shipment of 0.97 m^3, as reported in the FY97 STP *Annual Update*, consisted of 4 items (0.35 m^3) from subgroup -0 and 3 items (0.62 m^3) from subgroup -5.
[l] This treatability group (LA-W931, *Lead Requiring Sorting*) is not listed in the CPV; however it is discussed in section 3.4.3 of the *Background Volume*.
[m] This increase in LA-W931 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[n] This item of isopropyl alcohol waste was not included in the original STP inventory and it was shipped for treatment as discussed in DOE's letter dated January 9, 1997.

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.1	IPA Wastes	LA-W901-0	104	15.89							Decrease 96	Decrease 15.87	Decrease 1	Decrease 0.0005[b]	7	0.02		
		LA-W901-5									Increase 0 Decrease 0	Increase 4.11[c] Decrease 4.11			0	0.00	7	0.02
3.1.1	Scintillation Fluids	LA-W902-0	18	2.47					Decrease 15	Decrease 2.24	Decrease 2	Decrease 0.36			1	0.0038		
		LA-W902-5									Increase 0 Decrease 0	Increase 0.13[c] Decrease 0.13			0	0.00	1	0.0038
3.1.2	Lead Blankets	LA-W903-0	4	0.74							Decrease 4	Decrease 0.74			0	0.00	0	0.00
3.1.2	Soil with Heavy Metals	LA-W904-0	59	10.53									Decrease 1	Decrease ~~0.2082~~ 0.1047[d,1] *(see Rev 6.0 for correction)*	58	~~10.33~~ 10.43		
		LA-W904-5									Increase 1	Increase 0.11			1	0.11	59	10.54 ~~10.44~~
3.1.2	ER Soils	LA-W905-0	36	39.32							Decrease 36	Decrease 39.32			0	0.00	0	0.00

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.3	Aqueous Organic Liquids	LA-W906-0	45	1.65											45	1.65		
		LA-W906-4					Increase 27	Increase 0.36							27	0.36		
		LA-W906-5							Increase 3	Increase 0.43	Increase 73	Increase 3.62	Increase 1 Increase 24	Increase 0.0005[b] Increase ~~4.83~~ 4.26[c,d] *(see Rev 6.0 for correction)*	101	~~8.88~~ 8.31	173	10.32 ~~10.89~~
3.1.4	Organic-Contaminated Combustible Solids	LA-W911-0	307	28.32					Decrease 1	Decrease 0.11	Decrease 1	Decrease 0.11			305	28.10		
		LA-W911-4					Increase 33	Increase 0.68							33	0.68		
		LA-W911-5							Increase 2	Increase 0.17	Increase 31	Increase 5.24	Increase 7	Increase 1.46[e]	40	6.87	378	35.65

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.4	Organic-Contaminated Noncombustible Solids	LA-W919-0	80	7.82					Decrease 1	Decrease 0.11					79	7.71		
		LA-W919-4					Increase 9	Increase 0.38							9	0.38		
		LA-W919-5							Increase 9	Increase 0.001	Increase 74	Increase 9.58	Increase 6	Increase 0.95[a]	89	10.53	177	18.62
3.1.5	Combustible Debris	LA-W912-0	83	13.82											83	13.82		
		LA-W912-4					Increase 9	Increase 0.75							9	0.75		
		LA-W912-5									Increase 5	Increase 0.28			5	0.28	97	14.85
3.1.5	Activated or Inseparable Lead	LA-W921-0	74	15.60					Decrease 37	Decrease 7.42	Decrease 23	Decrease 3.41			14	4.77		
		LA-W21-5							Increase 51	Increase 10.11	Decrease 45 Increase 12	Decrease 9.05 Increase 2.29			18	3.35	32	8.12

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.5	Non-combustible Debris	LA-W922-0	41	5.62					~~Decrease~~ ~~1~~	~~Decrease~~ ~~.0002~~[h]					41	5.62		
		LA-W922-4					Increase 53	Increase 2.83							53	2.83		
		LA-W922-5							Increase 21	Increase 1.25	Increase 42	Increase 21.04			63	22.29	157	30.74
3.1.6	Aqueous Wastes with Heavy Metals	LA-W913-0	203	1.85							Decrease 12 Decrease 108	Decrease 0.030 Decrease 0.32			83	1.50		
		LA-W913-4					Increase 25	Increase 0.40							25	0.40		
		LA-W913-5									Increase 11	Increase 0.15			11	0.15	119	2.05
3.1.6	Corrosive Solutions	LA-W914-0	162	1.36							Decrease 102	Decrease 0.67			60	0.69		
		LA-W914-4					Increase 90	Increase 0.36							90	0.36		
		LA-W914-5							Increase 13	Increase 0.04	Increase 26	Increase 0.08			39	0.12	189	1.17

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.6	Aqueous Cyanides, Nitrates, Chromates, and Arsenates	LA-W915-0	15	0.13					Decrease 1	Decrease 0.0003	Decrease 1 Decrease 4	Decrease 0.0002 Decrease 0.0031			9	0.13		
		LA-W915-4					Increase 3	Increase 0.002							3	0.002		
		LA-W915-5							Increase 4	Increase 0.02	Increase 7	Increase 0.02			11	0.04	23	0.17
3.1.7	Water-Reactive Wastes	LA-W916-0	78	6.03											78	6.03		
		LA-W916-4					Increase 26	Increase 0.31							26	0.31		
		LA-W916-5							Increase 1	Increase 0.02	Increase 3	Increase 0.01			4	0.03	108	6.37
3.1.8	Compressed Gases Requiring Scrubbing	LA-W917-0	13	0.35											13	0.35	13	0.35
3.1.9	Compressed Gases Requiring Oxidation	LA-W918-0	6	0.08											6	0.08		
		LA-W918-4					Increase 168	Increase 1.23							168	1.23		
		LA-W918-5									Increase 2	Increase 0.01			2	0.01	176	1.32

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.10	Elemental Mercury	LA-W920-0	45	0.50											45	0.50		
		LA-W920-4					Increase 20	Increase 0.02							20	0.02		
		LA-W920-5									Increase 9	Increase 0.02			9	0.02	74	0.54
3.2.1	Halogenated Organic Liquids	LA-W907-0	385	16.58							Decrease 1	Decrease 0.0025			384	16.58		
		LA-W907-4					Increase 97	Increase 1.05							97	1.05		
		LA-W907-5							Increase 13	Increase 0.04	Increase 18	Increase 0.45			31	0.49	512	18.12
3.2.1	Nonhalogenated Organic Liquids	LA-W908-0	275	14.34											275	14.34		
		LA-W908-4					Increase 409	Increase 3.38							409	3.38		
		LA-W908-5							Increase 53	Increase 0.08	Increase 77	Increase 2.83			130	2.91	814	20.63

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Bulk Oils	LA-W909-0	28	3.75											28	3.75		
		LA-W909-4					Increase 8	Increase 1.48							8	1.48		
		LA-W909-5									Increase 28	Increase 2.28			28	2.28	64	7.51
3.2.1	PCB Wastes with RCRA Components	LA-W910-0	4	0.74											4	0.74	4	0.74
3.2.1	Liquid and Solid Oxidizers	LA-W923-0	55	0.20							Decrease 49	Decrease 0.0834			6	0.117		
		LA-W923-4					Increase 67	Increase 0.145							67	0.145		
		LA-W923-5							Increase 24	Increase 0.32	Decrease 11	De - crease 0.0034			13	0.317	86	0.58
3.3	Lead Waste - TBD	LA-W924-0	186	51.44					Decrease 57	Decrease 11.28					129	40.16	129	40.16
3.3	Mercury Wastes - TBD	LA-W925-0	63	18.30											63	18.30		
		LA-W925-4					Increase 37	Increase 0.42							37	0.42		
		LA-W925-5									Increase 14	Increase 1.52			14	1.52	114	20.24
3.3	Compressed Gases - TBD	LA-W926-0	10	1.25											10	1.25	10	1.25

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Biochemical Laboratory Wastes	LA-W927-0	9	1.34											9	1.34	9	1.34
3.3	Dewatered Treatment Sludge	LA-W928-0	1288	268.17	Decrease 1227	Decrease 255.46									61	12.71	61	12.71
3.4.1	Lead for Surface Decontamination	LA-W930-0	125	56.20					Decrease 83	Decrease 14.43[f]			Decrease 6	Decrease 8.34[d]	36	33.43		
		LA-W930-5							Increase 109	Increase 22.50	Increase 6	Increase 1.25			115	23.75	151	57.18
3.4.2	Nonradioactive or Suspect Waste Items to be Surveyed	LA-W929-0	1250	14.24			Decrease 1196 Decrease 41	Decrease 13.97 Decrease 0.26[d]	~~Decrease 4~~	~~Decrease 0.002~~[h]	Decrease 2 Decrease 9	Decrease 0.00094 Decrease 0.0029			2	0.0076[g]		
		LA-W929-5							Increase 1	Increase .00002					1	0.00002	3	0.0076[g]
None	Lead Requiring Sorting	LA-W931-0	48	9.97					Decrease 22	Decrease 4.58	Decrease 3	Decrease 0.63			23	4.76		
		LA-W931-5							Increase 28	Increase 5.73	Decrease 28 Increase 8	Decrease 5.73 Increase 0.44			8	0.44	31	5.20

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Explosives	LA-W932-0	0	0.00											0	0.00		
		LA-W932-4					Increase 1	Increase 0.000001							1	0.000001	1	0.000001
3.3	Lab Packs	LA-W933-0	0	0.00											0	0.00		
		LA-W933-4					Increase 114	Increase 0.17							114	0.17		
		LA-W933-5									Increase 28	Increase 0.13			28	0.13	142	0.30

CPV Section	Category	MWIR ID (by substream)	October, 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.5	Missing/ non-existent/ TBV	NONE											Increase 1 Increase 41 Increase 6	Increase 0.2082[d] Increase 0.26[d] Increase 8.34[d]			48	8.81

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

NOTES:

[a] Changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY96; however, only those reported as Rev. 5.0 "*Other Changes*" are included in this table. All others will be reported in the March, 1998 FY97 *Annual Update* and associated revision request. Therefore, the "*Net Covered Waste Inventory*" may not fully reflect the ACTUAL CPV covered waste inventory as of the date of this revision, in some instances.

[b] As reported in DOE's January 31, 1997 letter, the volume associated with the 104th LA-W901-0 item (0.0005 m^3) was repackaged, and bulked with other LA-W906 wastes in 1991, prior to issuance of the original STP. Since this "*missing*" item has now been located, its volume is being formally transferred to LA-W906 and will be managed as such.

[c] The 4.11 m^3 volume shown for LA-W901, and the 0.13m^3 volume shown for LA-W902 are corrections, to reflect the actual volumes shipped in FY96. As reported in the March, 1997 FY96 *Annual Update*, the volume changes for LA-W901 and LA-W902 in FY96 were based on current data in LANL's waste database. They are consistent with the original documentation submitted by the waste generator, and they are representative of actual volumes of these wastes when shipped for treatment. The volumes used during the preparation of the original STP were erroneous, thereby resulting in more waste being shipped than reported in the original STP inventory. This volume inconsistency was discussed in DOE's January 31, 1997 letter.

[d] These items from LA-W904, LA-W929, and LA-W930 have been determined to be missing or nonexistent. They are being transferred to the category "*Missing/Nonexistent/TBV*" until their presence or absence are fully and finally verified.

[e] Although a number of changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY96, only those reported here as Rev. 5.0 "*Other Changes*" are included in this table. These represent additional waste items that became covered waste after the end of FY96, for which opportunities exist for treatment during FY98. All other covered waste inventory changes since the end of FY96 will be reported in the March, 1998 FY97 *Annual Update*.

[f] This represents a correction to the March, 1996 FY95 *Annual Update* for LA-W930, which had reported that 84 items (14.64 m^3) had been 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.

[g] Two items in the original STP inventory for LA-W929, *Sort, Survey, and Decontamination*, were shipped to DSSI for treatment on December 18, 1996. This change in the covered waste volume will be reflected in the March,1998 FY97 *Annual Update*, and will be deleted from the CPV inventory in the associated revision. Therefore, these two items were reported as treated in the various submittals associated with Revision 4 of the STP, but were reported in the March, 1997 FY96 *Annual Update* (and are shown here) as having been in inventory as of September 30, 1996.

[h] This represents a correction to the March, 1996 FY95 *Annual Update*. It was reported that one LA-W922 item (0.0002 m^3) and 4 LA-W929 items (0.002 m^3) had been removed from inventory. This was incorrect because these items had been repacked into different containers, and are still in inventory.

[i] For LA-W906, Rev. 5.0 (Other Changes), the correct volume associated with this increase is 4.26 m^3 for LA-W904, Rev. 5.0 (Other Changes), the correct decrease is 0.105 m^3. Both of these corrrections are discussed and implemented in Rev 6.0.

EXHIBIT A

LOS ALAMOS NATIONAL LABORATORY

MIXED WASTE SITE TREATMENT PLAN

COMPLIANCE PLAN VOLUME (CPV)

BACKGROUND VOLUME

Revision 6.0

July 1998

(Rev. 6.0 7/98)

1.0 PURPOSE AND SCOPE OF THE COMPLIANCE PLAN VOLUME

1.1 Introduction

On October 6, 1992, Congress passed the Federal Facility Compliance Act (FFC Act) to address compliance by the United States Department of Energy (DOE) with the land disposal restrictions (LDR) for the storage of mixed waste set forth in Section 3004(j) of RCRA. The FFC Act requires the DOE to submit a Site Treatment Plan (STP) for developing treatment capacities and technologies to treat all of the facility's mixed waste, regardless of the time generated, to the standards promulgated pursuant to Section 3004(m) of RCRA. The FFC Act provides that the appropriate regulatory authority, the New Mexico Environment Department (NMED), may approve, approve with modifications or disapprove the STP. Prior to making such a determination, NMED is required by FFC Act to provide public notice, consider public comments, consult with the Environmental Protection Agency (EPA) and any other state in which a facility affected by the STP is located.

On March 31, 1995, DOE submitted its proposed STP to NMED for the treatment of mixed waste at the Los Alamos National Laboratory (LANL). On April 17, 1995, the public was given notice of and an opportunity to comment to NMED on the draft STP submitted by DOE. After considering public comment and otherwise complying with the FFC Act, NMED determined to approve the draft STP with modifications as provided in this document.

The STP is intended to fulfill the requirements of the FFC Act and establish an enforceable framework to allow DOE and the Regents of the University of California (Respondents) to achieve full compliance with LDR requirements under the New Mexico Hazardous Waste Act (HWA) and RCRA. The compliance dates set forth herein are enforceable time periods in which Respondents are required to develop treatment capacities and technologies, and treat or otherwise meet the requirements set forth for LDR under the HWA and RCRA. The STP will be fully implemented by a Compliance Order issued by NMED on or before October 6, 1995.

1.2 Contents

The STP contains two volumes and is intended to bring Respondents into compliance with LDR storage prohibitions under the HWA and RCRA. The Compliance Plan Volume of the STP provides overall schedules, including compliance dates, for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The Compliance Plan includes a schedule for the submittal of applications for permits, construction of treatment facilities, technology development, off-site transportation for treatment, and the treatment of mixed wastes in full compliance with the HWA and the implementing regulations at 20 NMAC 4.1, which

incorporates by reference 40 CFR Parts 260 through 270. The Background Volume of the STP contains progress reports as required in the Compliance Order. Respondents shall carry out the activities described in the STP, including the Compliance Plan Volume of the STP, in accordance with the schedules and requirements set forth in the STP and the Order.

1.3 STP Revisions and Amendments

The STP Compliance Plan Volume (CPV) has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order (FFCO), as amended and revised. Appendix A to the CPV provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

2.0 Compliance Schedules

The STP provides overall schedules for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The schedules include those activities required to bring existing waste treatment technologies into operation, process backlogged and currently generated waste, include schedules required to develop new facilities and capacity for treatment and establish an overall time frame for achieving compliance with the LDR requirements under the HWA and 20 NMAC 4.1.

2.1 Categories of Activities for Compliance Dates

The categories of activities for which compliance dates will be provided for different types of treatment approaches in the STP are listed in the tables below. The categories of activities are based on Section 3021(b)(1)(B)(I), (ii), and (iii) of the RCRA, to the extent appropriate.

2.1.1 Plans Where Treatment Technology Exists

For most of the mixed waste, treatment technologies have been identified and developed. For the waste that will be treated on-site, the categories of activities for compliance dates identified in Table I shall apply. Compliance dates for the activities identified in Table I may be found in Section 3.1.

Table I. Categories of Activities for Compliance for Mixed Waste with Existing Treatment Technologies.

A.	Submit permit applications to the NMED.
B.	Initiate construction as specified in the NMED permit.
C.	Complete system testing and commence operation.
D.	Begin treating mixed waste.
E.	Complete treatment of existing wastes to applicable regulatory standards.

2.1.2 Plans Where Technology Must Be Developed

For some mixed waste, no treatment technologies have been identified and developed, or the treatment technology must be modified or adapted to apply to such waste. For the waste that will be treated on-site, the categories of activities for compliance dates are identified in Table II and shall apply. Compliance dates for the activities identified in Table II may be found in Section 3.2.

Table II. Categories of Activities for Compliance Dates for Mixed Waste Without Existing Treatment Technologies.

A. Identify and develop technology.
B. Submit permit application to NMED; or
C. Submit a Notification of Intent to perform treatability study to NMED a minimum of 45 days prior to commencement of the study.
D. Initiate construction as specified in the NMED.
E. Commence systems testing.
F. Begin treating mixed waste.
G. Complete treatment of existing wastes to applicable regulatory standards.

2.1.3 Requirements Pertaining to Radionuclide Separation

The FFC Act sets additional requirements in cases in which DOE intends to conduct radionuclide separation of mixed waste. Should the DOE determine to do radionuclide separation of such mixed waste, DOE will schedule specific compliance dates based on category activities identified in Table III. "Radionuclide separation" shall mean segregating the radioactive portion of the mixed waste from the hazardous portion of the mixed waste.

Table III. Categories of Activities for Compliance Dates for Radionuclide Separation of Mixed Waste

A.	Complete an estimate of the volume of waste generated by each case of radionuclide separation.
B.	Complete an estimate of the volume of waste that would exist or be generated without radionuclide separation.
C.	Complete an estimate of the costs of waste treatment and disposal if radionuclide separation is used compared with the estimated costs if it is not used.
D.	Provide the assumptions underlying such estimates of waste volumes and cost estimates.
E.	Provide characterization methodologies for determining waste type.
F.	Submit a plan for treating or managing hazardous waste residues, accompanied by a NMED permit application.

2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment

In lieu of plans to treat mixed-waste on-site, DOE may treat waste at an off-site facility (at a commercial or non-commercial mixed waste treatment facility), or DOE may recycle waste at an off-site facility. Should DOE elect to use off-site recycling facilities in lieu of (or in combination with) treatment, it will follow the requirements prescribed in this Section in the same manner as if the waste was being shipped off-site for treatment. Any and all requirements

imposed by the off-site treatment/recycling facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment/recycling site shall be met by Respondents.

DOE shall notify the NMED Project Manager in writing as soon as possible if mixed waste is planned to be sent to a non-commercial facility. Notification should be made if possible when DOE is first considering such an option to allow NMED and the state to address any state issues or concerns with other states. The NMED Project Manager shall approve in writing the proposed off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility. Activities for mixed waste to be shipped off-site for treatment/recycling at a non-commercial facility are identified in Table V.

Should DOE decide to treat or recycle waste at a commercial off-site facility, DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility.

Table IV. Activities for Mixed Waste to be Shipped Off-Site for Treatment or Recycling at a Commercial facility

A.	Meet all regulatory requirements for off-site shipment.
B.	Provide documentation to NMED that waste has been received at an off-site facility for treatment or recycling within 45 working days of receipt of waste at the treatment facility.

2.1.4.1 Specific Site Requirements for Non-commercial Treatment Facilities

Shipment to Idaho National Engineering Laboratory

Prior to shipment, Idaho National Engineering Laboratory and Idaho Division of Environmental Quality shall be notified of any pending shipments of waste prior to shipment should DOE ship mixed low-level waste to INEL. Proper procedures including additional approvals (if necessary) and documentation shall be completed prior to the shipment of wastes to INEL. Management of post-treatment waste residuals or newly generated waste streams will be in accordance with the requirements of DOE, the State of Idaho and that state where they will be disposed. A modification to LANL's RCRA permit providing for the return of such wastes and/or residues to LANL must be approved by NMED prior to any such return of wastes and/or residuals to LANL. DOE will notify the NMED Project Manager in writing as soon as possible, and in any

event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams from INEL.

Shipments of low-level mixed wastes to planned facilities (not yet existing) will occur only after that treatment and schedules are approved by DOE-ID and the State of Idaho. Upon approval of the planned treatment facilities, the applicable protocol from the paragraph above will be implemented for mixed wastes to be treated at planned facilities.

Shipment to Oak Ridge Reservation

In the case that Oak Ridge Reservation (ORR) may not dispose of mixed-waste residues or new waste streams generated from off-site treatment, and they cannot be sent to another facility for disposal, then the residues may return to LANL. Should residual or newly generated waste streams be returned to LANL, the proper permits for the State of New Mexico must exist. DOE will notify the NMED Project Manager in writing as soon as possible, and in any event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams from ORR.

Table V. Activities for Mixed Waste to be Shipped Off-Site for Treatment or Recycling at a Non-commercial facility

A.	Request necessary approval from NMED for shipment of waste by category before shipping.
B.	Meet all regulatory requirements for off-site shipment.
C.	Provide documentation to NMED of confirmation of shipment date within 14 working days prior to sending waste to an off-site facility for treatment, disposal, or recycling, or storage pending treatment, disposal, or recycling.
D.	Provide documentation to NMED that waste has been received at an off-site facility for treatment within 45 working days of receipt of waste at the off-site facility.
E.	Meet all regulatory requirements to include RCRA Permit modifications for residual or newly generated waste streams after treatment or recycling.
F.	Provide documentation to NMED within 30 working days after receipt of residual or newly generated waste streams upon return to LANL.

2.1.5 Plans Related to Other Mixed Waste Activities

1. Activities other than the types of activities specifically called for in the FFC Act as requiring schedules are described in this STP. Some of these activities may be associated

with schedules which may contain compliance dates related to treatment of the DOE's mixed waste.

2. For mixed waste which is not sufficiently characterized to allow identification of appropriate treatment, notification of the characterization of such waste shall be in accordance with the annual update process described in the Compliance Order. If such characterization results in the addition or deletion of a treatability group or an increase in volume in a treatability group, a revision would be required pursuant to Section X of the Compliance Order.

3.0 LOW-LEVEL MIXED WASTE STREAMS

This Chapter presents proposed schedules for treatment technologies and the preferred options to treat low-level mixed waste streams (MLW or LLMW) at LANL. All preferred options not described below must be approved by NMED in accordance with the revision process pursuant to the Compliance Order.

The original October 4, 1995 STP inventory in each MLLW treatability group has been modified through the revision process in the FFCO. The table in CPV Appendix B provides a comprehensive summary of changes to the CPV covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of this revision. In Appendix B, the original STP inventory in each MLLW treatability group is denoted as subgroup 0 of that treatability group (e.g., the original volume of STP treatability group LA-W906 became LA-W906-0). Each revision that has since added volumes to individual treatability groups has resulted in creation of an additional subgroup, having the same number as the revision (e.g., LA-W906-4 was created in Revision 4.0, and LA-W906-5 was created in Revision 5.0).

In most Sections of this chapter, the subgroups of the treatability groups are not shown. In those cases, the Activities and Compliance Dates are applicable to the entire net volume of that treatability group. However, when subgroups of a treatability group have been assigned Activities and Compliance Dates unique to that subgroup, those subgroups are detailed in the text. For a complete listing of volumes by subgroup for all treatability groups, please refer to Appendix B.

3.1 Mixed Waste Streams for Which Technology Exists

The following subsections summarize LLMW treatability groups for which technology exists.

3.1.1 Off-site Treatment by Thermal Treatment

Treatability Group(s):

LLMW for Thermal Treatment (MWIR Treatment ID DS-S001)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
IPA wastes	LA-W901	D001, D009, F002, F003, F005	0	0.00
scintillation fluids	LA-W902	D001, F003, F005	0	0.00
Totals			**0**	**0.00**

Treatment Technology:

The waste will be treated at an off-site facility that combusts organic liquid waste. Should DOE decide to treat waste at an off-site non-commercial facility, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	9/30/96
B. Complete shipping waste	12/30/96
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.2 Off-site Treatment by Stabilization or Macroencapsulation

Treatability Group(s):

LLMW for Stabilization

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (M^3)
lead blankets	LA-W903	D007, D008	0	0.00
soil with heavy metals	LA-W904	D004, D005, D006, D007, D008, D009, D010, D011	3	0.45
ER soils	LA-W905	D028, D029, F001, F005 D010, D011	0	0.00
Totals			3	0.45

Treatment Technology:

The waste will be treated at an off-site facility that stabilizes or macroencapsulates wastes. Should DOE decide to treat waste at an off-site non-commercial facility, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	05/30/97
B. Complete shipping waste	12/30/98
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.3 Evaporative Oxidation (MWIR Treatment ID GJ-S801C)

Treatability Group(s):

LLMW for Evaporative Oxidation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906-0 LA-W906-4 LA-W906-5	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D030, D032, D033, D034, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	173	10.32
Totals			**173**	**10.32**

Note: See below for additional wastes in this treatability group

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site treatment facility (commercial or non-commercial) and state regulatory, federal regulatory or other regulatory requirements applicable

at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	12/30/96
B. Initiate construction	As specified in the NMED permit.
C. Complete system test and commence operation and begin treating mixed waste	6/19/99
D. Complete treatment of existing wastes to applicable regulatory standards, or	2/09/00
E. Complete shipment of existing wastes for treatment to an off- site facility.	2/09/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes

The following additional wastes will require management in this category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906-6	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D030, D032, D033, D034, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	88	5.74
Totals			**88**	**5.74**

Activities for wastes belonging to this treatability subgroup.

Activity	Compliance Dates
G. Complete shipment of existing wastes for treatment to an off- site facility.	2/09/03
H. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.4 Thermal Desorption (MWIR Treatment ID GJ-S801B)

LLMW for Thermal Desorption/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
organic-contaminated combustible solids	LA-W911	D001, D004, D008, D009, F001, F002, F003, F005	381	36.07
Totals			**381**	**36.07**

LLMW for Thermal Desorption

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
organic-contaminated noncombustible solids	LA-W919	D001, D003, D004, D005, D006, D007, D008, D009, D010, D011, D012, D015, D018, D019, D020, D022, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D042, D043, F001, F002, F003, F004, F005	227	27.31
Totals			**227**	**27.31**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	11/16/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	02/01/01
D. Complete treatment of existing wastes to applicable regulatory standards, or	02/14/02
E. Complete shipping of existing wastes to an off-site treatment facility.	02/14/02
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.5 Macroencapsulation (MWIR Treatment ID PX-S803)

Treatability Group(s):

LLMW for Macroencapsulation/Off-site treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
combustible debris	LA-W912	D001, D002, D003, D005, D006, D007, D008, D009, D011, D035, F001, F002, F003, F005	103	15.17
Totals			**103**	**15.17**

LLMW for Macroencapsulation

Treatability group		RCRA codes	Number of items	Net volume (m^3)
activated or inseparable lead	LA-W921	D008	34	7.09
noncombustible debris	LA-W922	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011	191	36.46
Totals			**225**	**43.55**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/04/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operation and begin treating mixed waste	02/01/00
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/25/00
E. Complete shipping of existing wastes to an off-site treatment facility.	08/25/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.6 Chemical Plating Waste Treatment Skid (MWIR Treatment ID LA-S004)

Treatability Group(s):

LLMW for Chemical Plating Waste Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous wastes with heavy metals	LA-W913	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011	139	3.07
corrosive solutions	LA-W914	D001, D002	197	1.21
aqueous cyanides, nitrates, chromates, and arsenates	LA-W915	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, F007, P029, P098	23	0.17
Totals			**359**	**4.45**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the

affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Resubmit revised permit application to NMED	10/30/96
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	03/17/00
D. Complete treatment of existing wastes to applicable regulatory standards, or	05/08/01
E. Complete shipping of existing wastes to an off-site treatment facility.	05/08/01
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.7 Water-reactive Metals Treatment Skid (MWIR Treatment ID LA-S003)

Treatability Group(s):

LLMW for Water-Reactive Metals Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
water-reactive wastes	LA-W916	D001, D003, D004, D005, D007, D008, D010, D011	113	7.05
Totals			**113**	**7.05**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	06/30/01
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	09/09/03
D. Complete treatment of existing wastes to applicable regulatory standards, or	04/21/04
E. Complete shipping of existing wastes to an off-site treatment facility.	04/21/04
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.8 Gas-scrubbing Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas-Scrubbing Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
compressed gases requiring scrubbing	LA-W917	D001, D002, P056	13	0.35
Totals			**13**	**0.35**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/28/03
E. Complete shipping of existing wastes to an off- site treatment facility.	08/28/03
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.9 Gas Oxidation Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas Oxidation Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
compressed gases requiring oxidation	LA-W918	D001, U226	177	1.32
Totals			**177**	**1.32**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/28/03
E. Complete shipping of existing wastes to an off-site treatment facility.	08/28/03
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.10 Mercury Amalgamation (MWIR Treatment ID PI-S801)

Treatability Group(s):

LLMW for Amalgamation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
elemental mercury	LA-W920	D006, D009, F005	79	0.66
Totals			**79**	**0.66**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/30/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	06/05/00
D. Complete treatment of existing waste to applicable regulatory standards, or	11/15/00
E. Complete shipping of existing wastes to an off-site treatment facility.	11/15/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.2 Mixed Waste Streams for Which Technology Requires Adaptation or for Which No Technology Exists

The following subsections summarize mixed waste streams for which technology requires adaptation or for which no technology exists.

3.2.1 Hydrothermal Processing

Treatability Group(s):

LLMW for Hydrothermal Processing/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
halogenated organic liquids	LA-W907	D001, D002, D003, D007, D009, D010, D011, D018, D019, D022, D028, D029, D035, D043, F001, F002, F003, F004, F005, U077, U080, U226, U227, U228, U236	525	18.26
nonhalogenated organic liquids	LA-W908	D001, D002, D003, D004, D007, D008, D009, D011, D018, D038, D040, F002, F003, F004, F005, U002, U019, U154, U169, U188, U220, U246	843	20.20
bulk oils	LA-W909	D002, D004, D005, D006, D007, D008, D009, D010, D011, D021, D027, D039, F001, F002, F003, F005	45	5.81
PCB wastes with RCRA components	LA-W910	D004, D005, D006, D007, D008, D009, D010, D011, D012, D015, D019, D027, D028, D030, D031, D032, D033, D034, D036, D039, D042, D043, F002, F003, F004, F005	40	2.75
Totals			**1453**	**47.02**

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
Liquid and solid oxidizers	LA-W923	D001, D003, D005	93	1.37
Totals			**93**	**1.37**

Treatment Technology:

The preferred destruction treatment technology option for this treatability group is Hydrothermal Processing which is a technology that needs development for adaptation to treat radioactive and PCB-bearing waste. This treatment technology is being adapted at LANL and is expected to be developed into a mobile treatment unit. The GJPO schedule for deployment of the unit indicates its possible availability to LANL after February 2002. Shipment off-site for treatment is a parallel preferred option. Respondents shall submit treatment or off-site shipment schedules and

options for NMED's approval by November 30, 1998. Treatment or other options other than off-site shipment shall be carried out pursuant to the revision process. Off-site shipments must be completed by February 2002.

Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

3.3 Mixed Waste Requiring Further Characterization or for Which Technology Assessment Has Not Been Done (MWIR Treatment ID LA-S701)

Treatability Group(s):

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
lead wastes - TBD	LA-W924	D003, D008	129	40.16
mercury wastes - TBD	LA-W925-0	D007, D008, D009, F001	63	18.30
compressed gases - TBD	LA-W926	D001, D007, D009, D022, P056, U080, U226	10	1.25
biochemical laboratory wastes	LA-W927	D001, D003	9	1.34
dewatered treatment sludge	LA-W928	see Subsection 3.3 in the Background Volume	61	12.71
Totals			**272**	**73.76**

Note: See below for additional wastes in some of these treatability groups

Treatment Technology:

The following steps will be taken to properly characterize this waste:

- Conduct additional generator interviews
- Prepare a sampling plan for waste not adequately characterized

- Conduct sampling and analysis
- Determine treatment options

Activities for wastes originally belonging to these treatability groups as listed above.

Activity	Compliance Dates
A. Complete generator interviews	10/30/95
B. Complete sampling and analysis plan	1/30/96
C. Complete sampling and analysis	9/30/98
D. Complete determination of treatment options	12/20/98
E. Complete shipping of existing wastes to an off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups.	12/20/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes and treatability groups:

The following additional wastes will require management in this category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	RCRA Codes	Number of items	Net volume (m3)
mercury wastes-TBD	LA-W925-4 LA-W925-5 LA-W925-6	D003, D007, D008, D009, F001, F002, F005	74	2.61
~~mercury wastes-TBD~~	~~LA-W925-5~~	~~D007, D008, D009, F001~~	~~14~~	~~1.52~~
explosives	LA-W932	D003	1	0.000001
labpacks	LA-W933	D001, D002, D003, D004, D005, D006, D007, D008, D010, F003, F005, D011, P012, P029, P098, P106, P113, P120, U131, U144, U145, U188, U190, U204, U216, U219	149	0.30
Totals			**224**	**2.91**

Activities for wastes belonging to these treatability groups and subgroups.

Activity	Compliance Dates
G. Complete sampling and analysis plan	1/30/99
H. Complete sampling and analysis	9/30/01
I. Complete determination of treatment options	12/20/01
J. Complete shipping of wastes to an off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups	12/20/03
K. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at off-site facility

3.4 Plans for Other Types of Activities

The following subsection summarizes plans for other types of activities.

3.4.1 Lead Decontamination (MWIR Treatment ID LA-S001)/Off-site Treatment (preferred option)

Treatability Group(s):

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net volume (m^3)	No. Items	Net volume (m^3)	No. Items	Net volume (m^3)
lead for surface contamination	LA-W930-0 LA-W930-5	0	0.00	134	49.19	134	49.19
Totals		**0**	**0.00**	**134**	**49.19**	**134**	**49.19**

Note: See below for additional wastes in this treatability group

Treatment Technology:

This treatability group contains two categories of lead for decontamination:

The first category is lead in the original LA-W930-0 inventory that is amenable to decontamination in the on-site lead decontamination trailer, which was designed to decontaminate simple lead shapes, such as lead bricks, of certain physical dimensions. The trailer is on-site and has operated, but needs an upgrade for prolonged operation.

The lead in the second category is lead in the original LA-W930-0 inventory that is not amenable to decontamination in the on-site lead decontamination trailer, plus subsequent additions to the original inventory shown in Appendix B. This lead will be processed using other on-site decontamination processes, such as dry sandblasting or hand-scrubbing, or sent to off-site lead decontamination services.

Any lead not acceptable for on-site or off-site lead decontamination, plus any lead unsuccessfully decontaminated, will be designated for treatment and disposal at an off-site

facility, or for recycle through an off-site capability, such as metal melting to create shielding blocks or a DOE lead bank. Non-conforming items will be reassigned to appropriate treatability groups in accordance with the FFCO.

Should DOE decide to treat or recycle waste at an off-site non-commercial facility in lieu of plans to treat or recycle such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment/recycle option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment/ recycling facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment/recycling site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility.

Lead shapes and forms in the first category.

Activity	Compliance Date
A. Complete lead decontamination	09/30/97

Lead shapes and forms in the second category.

Activity	Compliance Date
A. Provide schedule for development of lead processing techniques and options	06/30/96
B. Segregate lead waste into decontamination groupings	07/31/97
C. Complete shipment of wastes to decontamination operations, or	12/02/98
D. Determine treatment/disposal or other recycle options for lead waste not acceptable for decontamination	12/02/98
E. Complete treatment/disposal operations or other recycle operations for lead waste not acceptable for decontamination	07/31/99
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes

The following additional wastes will require management in the second category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net volume (m^3)	No. Items	Net volume (m^3)	No. Items	Net volume (m^3)
lead for surface contamination	LA-W930-6	0	0.00	14	12.06	14	12.06
Totals		**0**	**0.00**	**14**	**12.06**	**14**	**12.06**

Activities for wastes belonging to this treatability subgroup.

Activity	Compliance Date
G. Complete shipment of wastes to decontamination operations, or	12/02/99
H. Determine treatment/disposal or other recycle options for lead waste not acceptable for decontamination	12/02/99
I. Complete treatment/disposal operations or other recycle operations for lead waste not acceptable for decontamination	07/31/00
J. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.4.2 Sorting, Surveying, and Decontamination (MWIR Treatment ID GJ-S804)

Treatability Group(s):

Treatability group	MWIR waste ID	Number of items	Net volume (m^3)
1. nonradioactive or suspect waste items to be surveyed	LA-W929-0(1)	0	0.0
2. nonradioactive or suspect waste items to receive RCRA and radiological characterization	LA-W929-0(2)	0	0.00
3. nonradioactive or suspect waste items that cannot or should not be sampled	LA-W929-0(3)	0	0.0
Totals		**0**	**0.00**

Note: See below for additional wastes in this treatability group

Treatment Technology:

The waste items in part 1 of the original volume in this treatability group will be surveyed using a field operation that will survey waste suspect of radioactive contamination to determine whether it is radioactively contaminated. The work will be done on-site with equipment and staffing provided by LANL or another DOE site. Waste determined not to be radioactively contaminated will be treated using commercial facilities permitted to treat hazardous waste; waste determined to be radioactively contaminated will be assigned to applicable treatability groups and/or sent to offsite facilities for appropriate treatment.

Waste items in part 2 of this treatability group will be surveyed using complete RCRA and radiological sampling and characterization. Waste sampled under this alternative will be treated and disposed as low-level mixed waste; the waste will be assigned to applicable treatability groups and/or sent to off-site facilities for appropriate treatment based on the results of this characterization.

Sampling for this characterization alternative will be conducted in accordance with RCRA SW-846 methods. To ensure an adequate volume of waste material is available for sampling and to maximize the cost effectiveness of the sampling activities, some lab packed and other waste items may be bulked into larger volume containers; all RCRA waste codes will be transferred to the bulked wastes to ensure correct RCRA categorization is maintained. It may be found, when preparing a given drum for sampling, (for example, solid small volume waste items that cannot be sampled in accordance with EPA SW-846 methods) are in fact not amenable to sampling and should have been included in the item count for group 3 . If visual inspection so indicates, these waste items will be transferred to Group 3 and assigned to applicable treatability groups based on existing knowledge.

Waste items in part 3 of this treatability group which are confirmed not amenable to sampling (e.g., lead-acid batteries, spray paint cans) will be assigned to applicable treatability groups based on existing knowledge. It may be found, when inspecting a given drum, that some items can in fact be sampled in accordance with EPA SW-846 methods and should have been included in the item count for Group 2. If visual inspection so indicates, these waste items will be transferred to Group 2 and sampled accordingly.

Additional compliance dates will be proposed for any waste items in this treatability group found not to have available treatment/disposal options following a complete review of all survey, analytical, or visual inspection data obtained through these processes.

For all waste items in this treatability group, shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within (45) working days of receipt of waste at the treatment facility.

Activities for waste items in part 1 of this treatability group.

Activity	Compliance Dates
A. Complete field survey	10/30/96
B. Submit documentation declaring waste items as nonradioactive, or submit documentation assigning waste items to applicable treatability groups	2/28/97
C. Propose additional compliance dates if necessary	4/30/97

Activities for waste items in part 2 of this treatability group.

Activity	Compliance Dates
D. Complete RCRA and radiological sampling	1/28/97
E. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	2/28/97
F. Propose additional compliance dates if necessary	4/30/97

Activities for waste items in part 3 of this treatability group.

Activity	Compliance Dates
G. Complete visual verification	1/28/97
H. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	6/30/97
I. Propose additional compliance dates if necessary	9/30/97

Additional wastes:

Treatability group	MWIR waste ID	Number of items	Net volume (m^3)
Nonradioactive or suspect waste items	LA-W929-5	0	0.00
Totals		**0**	**0.00**

Activities for items added as subgroup 5 of this treatability group.

Activity	Compliance Dates
J. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	3/31/98
K. Propose additional Compliance Dates if necessary	3/31/98

3.5 Management of "Missing" Items.

Waste Category:

Category	MWIR waste ID	No. Items	Net volume (m^3)
Missing/nonexistent/TBV	None	48	8.81
Totals		**48**	**8.81**

Treatment Technology:

During visual inspections and sampling activities in support of STP waste work-off, occasionally an item cannot be found, or it is not located in the containers in which it is expected to be, according to the LANL data files for the waste item. In some instances, such items could not be verified as having ever been received in storage at LANL, and further follow-up investigations of the record files revealed that for various reasons, the waste items were never in fact generated, although on paper they were included in the original STP inventory.

In these instances, DOE and UC, and their contractors, perform a thorough inspection of both the physical inventories and the data files. When DOE and UC determine that an STP covered waste item does not exist, transfer of the item to the category called *"Missing/ nonexistent/TBV (*to be verified*)*", is requested through the revision process associated with the next *Annual Update.*

DOE and UC will re-verify the absence of all *"Missing/ nonexistent/TBV"* items container-by-container, as each STP waste item is being sampled, repackaged, or otherwise prepared for on- or off-site treatment. The final verification that all *"Missing/ nonexistent/TBV"* items do not in fact exist will be completed by April 21, 2004, at which time all remaining MLLW items in the original STP inventory will have been treated. At that time, DOE and UC will request deletion of all items having been fully verified as missing or nonexistent.

At any time during the re-verification process, should any of these items be discovered to exist, NMED will be notified, and approval will be requested for assignment of the rediscovered items to the appropriate TG. If necessary, they will be assigned new Activities and Compliance Dates, in accordance with the terms of the FFCO.

The following steps will be taken to verify presence or absence of this waste:

Activity	Compliance Dates
A. Initiate re-verification process on a shipment-by-shipment basis	01/03/98
B. Complete re-verification process	04/21/04
C. Re-assign any existing items to appropriate treatability groups	04/21/04
D. Complete treatment of existing wastes to applicable regulatory standards, or	10/30/04
E. Complete shipping of existing wastes to an off-site treatment facility	10/30/04
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

4.0 MIXED TRANSURANIC WASTE

Treatment Group(s):

Assorted Mixed Transuranic Waste

Treatment Technology

Respondents are required to develop treatment technologies and treat mixed transuranic (MTRU) waste at LANL according to the schedule set forth below:

Activity	Compliance Date
A. Development of treatment technologies	June 30, 1999
B. Submit permit application amendment or modification to NMED for treatment of MTRU	December 31, 1999
C. Begin treating MTRU	Six (6) months after NMED permit issuance
D. Complete treatment of existing MTRU to applicable regulatory standards	December 31, 2010

The above schedule is not based on the assumption that WIPP will be a disposal option or that DOE will receive a variance from treatment standards for land disposal of MTRU waste to be disposed at WIPP. All revisions to compliance dates shall be in accordance with the procedures set forth in the compliance order.

CPV APPENDIX A
HISTORY OF STP REVISIONS AND AMENDMENTS

As discussed in CPV Section 1.3, the STP Compliance Plan Volume has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order, as amended and revised. This Appendix provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

To date, there have been six revisions and two amendments to the CPV. In addition, the FFCO was amended once, on May 20, 1997. The following Table A-1 provides a summary of these changes. More detailed descriptions can be found in the CPV Update portion of each year's STP *Annual Update,* and the original correspondence requesting each change.

Table A-1. SUMMARY OF CHANGES TO THE CPV AND THE FFCO

Action	Document Modified	Effective Date	Effect on FFCO/STP
Rev. 1.0	STP/CPV	6/12/96	Added off-site treatment as a parallel preferred option for most MLLW treatability groups
Rev. 2.0	STP/CPV	12/9/96	Reduced volume of LA-W928 by approving reclassification of sludges as LLW
Amendment 1.0	STP/CPV	10/30/96	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Rev. 3.0	STP/CPV	1/27/97	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Amendment 1.0	FFCO	5/20/97	Modified FFCO Sections IV, V, IX, and X to streamline waste transfers and deletions
Amendment 2.0	STP/CPV	9/4/97	Extended CPV Activity 3.1.2B Compliance Date to 12/29/97
Rev. 4.0	STP/CPV	*12/29/97*	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added treatability groups, and deleted treated items
Rev. 5.0	STP/CPV	*12/29/97*	Added volumes reported in FY95 and FY96 *Annual Updates* (and certain other items) to several treatability groups, added Activities and Compliance Dates, added CPV Appendices, and deleted treated items
Rev. 6.0	STP/CPV	*(to be added)*	Added volumes reported in FY97 *Annual Update* to several treatability groups, added certain Activities and Compliance Dates, adjusted several original inventory volumes, transferred one LA-W929 item to a new treatability group, and deleted treated items

CPV APPENDIX B
SUMMARY OF CPV INVENTORY CHANGES

The following tables provide a comprehensive summary of changes to the CPV covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of this revision. The volumes given in the tables reflect changes to the individual MLLW treatability group volumes due to increases or decreases, as noted. Table B-1 reports the inventory changes arising from Revision 6.0, while Table B-2 reports the inventory changes previously approved.

Key to Reading the Subgroups

The original STP inventory in each MLLW treatability group is now denoted as subgroup -0 of that treatability group (e.g., the original volume of STP treatability group LA-W906 became LA-W906-0). The original October 4, 1995 STP inventory in each MLLW treatability group has been modified through the revision process in the FFCO. The following revisions have affected volumes in individual treatability groups to date:

Revision	Effect on Volumes
Rev. 2.0	Reduced volume of LA-W928
Rev. 3.0	Divided original volume of LA-W929 into three subgroups
Rev. 4.0	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added new treatability groups
Rev. 5.0	Increased and decreased volumes in several treatability groups
Rev. 6.0	Increased and decreased volumes in several treatability groups, transferred the volume in LA-W929-5 to another treatability group

Each revision that has added volumes to individual treatability groups has resulted in creation of an additional subgroup of that treatability group, having the same number as the revision (e.g., LA-W906-4 was created in Revision 4.0, and LA-W906-5 was created in Revision 5.0).

Additions and Deletions to Date

To date, MLLW inventory increases and decreases have been incorporated into the covered waste inventories through Revisions 2.0, 4.0, 5.0, and 6.0. Revision 2.0 incorporated decreases in treatability group LA-W928 due to deletion of covered waste items. Rev. 4.0 resulted in decreases to LA-W929 and increases in other TGs, primarily by transferring LA-W929 items to other TGs. Rev. 5.0 and 6.0 resulted in both additions to and deletions of covered waste volumes (i.e., increases and decreases) in a number of TGs. Therefore, the Appendix B tables that follow show that subgroups -4, -5, and -6 exist for some treatability groups, but not for all.

These tables provide a master list of MLLW inventory changes presented in the *Annual Updates,* to enable users of the STP to track all changes in the LANL MLLW covered waste inventory that occurred since the original STP inventory was established in the October 4, 1995 FFCO/CPV.

Changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY97. However, only those reported as of Rev. 6.0 are included in this table. All others will be reported in the next *Annual Update* and associated revision request. Therefore, the *"Net Covered Waste Inventory"* may not fully reflect the actual CPV covered waste inventory as of the date of this revision, in some instances.

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.1	IPA Wastes	LA-W901-0	7	0.02	Decrease 7	Decrease 0.02			0	0.00	0	0.00
3.1.1	Scintillation Fluids	LA-W902-0	1	0.0038	Decrease 1	Decrease 0.0038			0	0.00	0	0.00
3.1.2	Lead Blankets	LA-W903-0	0	0.00					0	0.00	0	0.00
3.1.2	Soil with Heavy Metals	LA-W904-0	58	~~10.33~~ 10.43[a]	Decrease 6 Decrease 2 Decrease 46 Decrease 2	Decrease 0.62[b] Decrease 0.42[c] Decrease 8.91 Decrease 0.14			2	0.34		
		LA-W904-5	1	0.11					1	0.11	3	0.45
3.1.2	ER Soils	LA-W905-0	0	0.00					0	0.00	0	0.00

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.3	Aqueous Organic Liquids	LA-W906-0	45	1.65					45	1.65		
		LA-W906-4	27	0.36					27	0.36		
		LA-W906-5	101	~~8.88~~ 8.31[d]					101	8.31		
		LA-W906-6	0	0.00	Increase 88	Increase 5.74			88	5.74	261	16.06
3.1.4	Organic-Contaminated Combustible Solids	LA-W911-0	305	28.10	Increase 2	Increase 0.42[c]			307	28.52		
		LA-W911-4	33	0.68					33	0.68		
		LA-W911-5	40	6.87					40	6.87		
		LA-W911-6	0	0.00	Increase 1	Increase 0.0038			1	0.0038	381	36.07
3.1.4	Organic-Contaminated Noncombus-tible Solids	LA-W919-0	79	7.71	Increase 1	Increase 0.11[e]			80	7.82		
		LA-W919-4	9	0.38					9	0.38		
		LA-W919-5	89	10.53					89	10.53		
		LA-W919-6	0	0.00	Increase 49	Increase 8.58			49	8.58	227	27.31

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.5	Combustible Debris	LA-W912-0	83	13.82					83	13.82		
		LA-W912-4	9	0.75					9	0.75		
		LA-W912-5	5	0.28					5	0.28		
		LA-W912-6	0	0.00	Increase 6	Increase 0.32			6	0.32	103	15.17
3.1.5	Activated or Inseparable Lead	LA-W921-0	14	4.77	Decrease 1 Decrease 2	Decrease 0.06[f] Decrease 1.72			11	2.99		
		LA-W921-5	18	3.35	Decrease 4	Decrease 0.83[f]			14	2.52		
		LA-W921-6	0	0.00	Increase 9	Increase 1.58			9	1.58	34	7.09
3.15	Non-combustible Debris	LA-W922-0	41	5.62	Decrease 14	Decrease 2.915			27	2.71		
		LA-W922-4	53	2.83					53	2.83		
		LA-W922-5	63	22.29	Decrease 3	Decrease 0.62			60	21.67		
		LA-W922-6	0	0.00	Increase 51	Increase 9.25			51	9.25	191	36.46

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.6	Aqueous Wastes with Heavy Metals	LA-W913-0	83	1.50					83	1.50		
		LA-W913-4	25	0.40					25	0.40		
		LA-W913-5	11	0.15					11	0.15		
		LA-W913-6	0	0.00	Increase 20	Increase 1.02			20	1.02	139	3.07
3.1.6	Corrosive Solutions	LA-W914-0	60	0.69					60	0.69		
		LA-W914-4	90	0.36					90	0.36		
		LA-W914-5	39	0.12					39	0.12		
		LA-W914-6	0	0.00	Increase 8	Increase 0.04			8	0.04	197	1.21
3.1.6	Aqueous Cyanides, Nitrates, Chromates, and Arsenates	LA-W915-0	9	0.13					9	0.13		
		LA-W915-4	3	0.002					3	0.002		
		LA-W915-5	11	0.04					11	0.04	23	0.17
3.1.7	Water-Reactive Wastes	LA-W916-0	78	6.03					78	6.03		
		LA-W916-4	26	0.31					26	0.31		
		LA-W916-5	4	0.03					4	0.03		
		LA-W916-6	0	0.00	Increase 5	Increase 0.68			5	0.68	113	7.05
3.1.8	Compressed Gases Requiring Scrubbing	LA-W917-0	13	0.35					13	0.35	13	0.35

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.9	Compressed Gases Requiring Oxidation	LA-W918-0	6	0.08					6	0.08		
		LA-W918-4	168	1.23					168	1.23		
		LA-W918-5	2	0.01					2	0.01		
		LA-W918-6	0	0.00	Increase 1	Increase 0.0002			1	0.0002	177	1.32
3.1.10	Elemental Mercury	LA-W920-0	45	0.50					45	0.50		
		LA-W920-4	20	0.02					20	0.02		
		LA-W920-5	9	0.02					9	0.02		
		LA-W920-6	0	0.00	Increase 5	Increase 0.12			5	0.12	79	0.66
3.2.1	Halogenated Organic Liquids	LA-W907-0	384	16.58	Decrease 3	Decrease 0.0076			381	16.57		
		LA-W907-4	97	1.05					97	1.05		
		LA-W907-5	31	0.49					31	0.49		
		LA-W907-6	0	0.00	Increase 16	Increase 0.15			16	0.15	525	18.26

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Nonhalogen-ated Organic Liquids	LA-W908-0	275	14.34	Increase 0[g] Decrease 4 Decrease 0[h]	Increase 0.076 Decrease 0.49 Decrease 0.11			271	13.82		
		LA-W908-4	409	3.38					409	3.38		
		LA-W908-5	130	2.91					130	2.91		
		LA-W908-6	0	0.00	Increase 33	Increase 0.09			33	0.09	843	20.20
3.2.1	Bulk Oils	LA-W909-0	28	3.75	Increase 0[i] Decrease 23	Increase 0.47 Decrease 2.22			5	2.00		
		LA-W909-4	8	1.48					8	1.48		
		LA-W909-5	28	2.28					28	2.28		
		LA-W909-6	0	0.00	Increase 4	Increase 0.05			4	0.05	45	5.81
3.2.1	PCB Wastes with RCRA Components	LA-W910-0	4	0.74	Increase 6	Increase 0.62[b]			10	1.36		
		LA-W910-6	0	0.00	Increase 30	Increase 1.39			30	1.39	40	2.75

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Liquid and Solid Oxidizers	LA-W923-0	6	0.117					6	0.117		
		LA-W923-4	67	0.145					67	0.145		
		LA-W923-5	13	0.317					13	0.317		
		LA-W923-6	0	0.00	Increase 7	Increase 0.795			7	0.795	93	1.37
3.3	Lead Waste - TBD	LA-W924-0	129	40.16					129	40.16	129	40.16
3.3	Mercury Wastes - TBD	LA-W925-0	63	18.30					63	18.30		
		LA-W925-4	37	0.42					37	0.42		
		LA-W925-5	14	1.52					14	1.52		
		LA-W925-6	0	0.00	Increase 23	Increase 0.67			23	0.67	137	20.91
3.3	Compressed Gases - TBD	LA-W926-0	10	1.25					10	1.25	10	1.25
3.3	Biochemical Laboratory Wastes	LA-W927-0	9	1.34					9	1.34	9	1.34
3.3	Dewatered Treatment Sludge	LA-W928-0	61	12.71					61	12.71	61	12.71
3.3	Explosives	LA-W932-0	0	0.00					0	0.00		
		LA-W932-4	1	0.000001					1	0.000001	1	0.000001

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Lab Packs	LA-W933-0	0	0.00					0	0.00		
		LA-W933-4	114	0.17					114	0.17		
		LA-W933-5	28	0.13					28	0.13		
		LA-W933-6	0	0.00	Increase 6	Increase 0.003	Increase 1	Increase 0.00002[j]	7	0.003	149	0.30
3.4.1	Lead for Surface Decontamin-ation	LA-W930-0	36	33.43	Decrease 1 Decrease 4 Decrease 6 Decrease 2	Decrease 0.11[k] Decrease 0.35[k] Decrease 1.04 Decrease 5.66			23	26.27		
		LA-W930-5	115	23.75	Decrease 1 Decrease 3	Decrease 0.21[k] Decrease 0.62[k]			111	22.92		
		LA-W930-6	0	0.00	Increase 14	Increase 12.06			14	12.06	148	61.25

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.4.2	Nonradioactive or Suspect Waste Items to be Surveyed	LA-W929-0	2	0.0076	Decrease 2	Decrease 0.0076			0	0.00		
		LA-W929-5	1	0.00002			Decrease 1	Decrease 0.00002[j]	0	0.00	0	0.00
None[l]	Lead Requiring Sorting	LA-W931-0	23	4.76	Decrease 23 Increase 0[m]	Decrease 4.78 Increase 0.02			0	0.00		
		LA-W931-5	8	0.44					8	0.44		
		LA-W931-6	0	0.00	Increase 4	Increase 0.64			4	0.64	12	1.08
None[n]	IPA	None	0	0.00	Increase 1 Decrease 1	Increase 0.0005[n] Decrease 0.0005[n]			0	0.00	0	0.00

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Category	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)			Items	Volume (m^3)	Items	Volume (m^3)
3.5	Missing/ nonexistent/ TBV	NONE (Revision 5)	48	8.81					48	8.81	48	8.81

NOTES:

[a] This correction in LA-W904 volume arises from an error in the Appendix B in Revision 4/5 as discussed in Revision 6.0.
[b] This transfer of LA-W904 waste to LA-W910 was approved by NMED on September 18, 1997 as discussed in Revision 6.0
[c] This transfer of LA-W904 waste to LA-W911 was approved by NMED on September 18, 1997 as discussed in Revision 6.0
[d] This correction in LA-W906 volume arises from an error in the Appendix B in Revision 4/5 as discussed in Revision 6.0.
[e] The volume increase arises from the return of unused treatability study sample. It has been returned to the original inventory of LA-W919 (subgroup -0) consistent with the inventory subgroup from which the sample was removed.
[f] These 5 items in subgroups LA-W921-0 and -5 (0.89 m^3 total) were shipped on December 9, 1996 as discussed in DOE's letter dated December 24, 1996.
[g] This increase in LA-W908 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[h] This decrease in LA-W908 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[I] This correction in LA-W909 volume arises from an error in Appendix B in Revision 4/5 as discussed in Revision 6.0.
[j] This transfer of LA-W929 waste to LA-W933 is discussed in Revision 6.0.
[k] The shipment of 0.32 m^3, as reported in the FY97 STP *Annual Update*, consisted of 1 item (0.11 m^3) from subgroup LA-W930-0 and 1 item (0.21 m^3) from subgroup -5. The shipment of 0.97 m^3, as reported in the FY97 STP *Annual Update*, consisted of 4 items (0.35 m^3) from subgroup -0 and 3 items (0.62 m^3) from subgroup -5.
[l] This treatability group (LA-W931, *Lead Requiring Sorting*) is not listed in the CPV; however it is discussed in section 3.4.3 of the *Background Volume*.
[m] This increase in LA-W931 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[n] This item of isopropyl alcohol waste was not included in the original STP inventory and it was shipped for treatment as discussed in DOE's letter dated January 9, 1997.

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.1	IPA Wastes	LA-W901-0	104	15.89							Decrease 96	Decrease 15.87	Decrease 1	Decrease 0.0005[b]	7	0.02		
		LA-W901-5									Increase 0 Decrease 0	Increase 4.11[c] Decrease 4.11			0	0.00	7	0.02
3.1.1	Scintillation Fluids	LA-W902-0	18	2.47					Decrease 15	Decrease 2.24	Decrease 2	Decrease 0.36			1	0.0038		
		LA-W902-5									Increase 0 Decrease 0	Increase 0.13[c] Decrease 0.13			0	0.00	1	0.0038
3.1.2	Lead Blankets	LA-W903-0	4	0.74							Decrease 4	Decrease 0.74			0	0.00	0	0.00
3.1.2	Soil with Heavy Metals	LA-W904-0	59	10.53									Decrease 1	Decrease ~~0.2082~~ 0.1047[d,i] *(see Rev 6.0 for correction)*	58	~~10.33~~ 10.43		
		LA-W904-5									Increase 1	Increase 0.11			1	0.11	59	10.54 ~~10.44~~
3.1.2	ER Soils	LA-W905-0	36	39.32							Decrease 36	Decrease 39.32			0	0.00	0	0.00

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.3	Aqueous Organic Liquids	LA-W906-0	45	1.65											45	1.65		
		LA-W906-4					Increase 27	Increase 0.36							27	0.36		
		LA-W906-5							Increase 3	Increase 0.43	Increase 73	Increase 3.62	Increase 1 Increase 24	Increase 0.0005[b] Increase ~~4.83~~ 4.26[e,i] *(see Rev 6.0 for correction)*	101	~~8.88~~ 8.31	173	10.32 ~~10.89~~
3.1.4	Organic-Contaminated Combustible Solids	LA-W911-0	307	28.32					Decrease 1	Decrease 0.11	Decrease 1	Decrease 0.11			305	28.10		
		LA-W911-4					Increase 33	Increase 0.68							33	0.68		
		LA-W911-5							Increase 2	Increase 0.17	Increase 31	Increase 5.24	Increase 7	Increase 1.46[e]	40	6.87	378	35.65

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.4	Organic-Contaminated Noncombustible Solids	LA-W919-0	80	7.82					Decrease 1	Decrease 0.11					79	7.71		
		LA-W919-4					Increase 9	Increase 0.38							9	0.38		
		LA-W919-5							Increase 9	Increase 0.001	Increase 74	Increase 9.58	Increase 6	Increase 0.95[c]	89	10.53	177	18.62
3.1.5	Combustible Debris	LA-W912-0	83	13.82											83	13.82		
		LA-W912-4					Increase 9	Increase 0.75							9	0.75		
		LA-W912-5									Increase 5	Increase 0.28			5	0.28	97	14.85
3.1.5	Activated or Inseparable Lead	LA-W921-0	74	15.60					Decrease 37	Decrease 7.42	Decrease 23	Decrease 3.41			14	4.77		
		LA-W21-5							Increase 51	Increase 10.11	Decrease 45 Increase 12	Decrease 9.05 Increase 2.29			18	3.35	32	8.12

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.5	Non-combustible Debris	LA-W922-0	41	5.62					~~Decrease~~ ~~1~~	~~Decrease~~ ~~.0002~~[h]					41	5.62		
		LA-W922-4					Increase 53	Increase 2.83							53	2.83		
		LA-W922-5							Increase 21	Increase 1.25	Increase 42	Increase 21.04			63	22.29	157	30.74
3.1.6	Aqueous Wastes with Heavy Metals	LA-W913-0	203	1.85							Decrease 12 Decrease 108	Decrease 0.030 Decrease 0.32			83	1.50		
		LA-W913-4					Increase 25	Increase 0.40							25	0.40		
		LA-W913-5									Increase 11	Increase 0.15			11	0.15	119	2.05
3.1.6	Corrosive Solutions	LA-W914-0	162	1.36							Decrease 102	Decrease 0.67			60	0.69		
		LA-W914-4					Increase 90	Increase 0.36							90	0.36		
		LA-W914-5							Increase 13	Increase 0.04	Increase 26	Increase 0.08			39	0.12	189	1.17

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.6	Aqueous Cyanides, Nitrates, Chromates, and Arsenates	LA-W915-0	15	0.13					Decrease 1	Decrease 0.0003	Decrease 1 Decrease 4	Decrease 0.0002 Decrease 0.0031			9	0.13		
		LA-W915-4					Increase 3	Increase 0.002							3	0.002		
		LA-W915-5							Increase 4	Increase 0.02	Increase 7	Increase 0.02			11	0.04	23	0.17
3.1.7	Water-Reactive Wastes	LA-W916-0	78	6.03											78	6.03		
		LA-W916-4					Increase 26	Increase 0.31							26	0.31		
		LA-W916-5							Increase 1	Increase 0.02	Increase 3	Increase 0.01			4	0.03	108	6.37
3.1.8	Compressed Gases Requiring Scrubbing	LA-W917-0	13	0.35											13	0.35	13	0.35
3.1.9	Compressed Gases Requiring Oxidation	LA-W918-0	6	0.08											6	0.08		
		LA-W918-4					Increase 168	Increase 1.23							168	1.23		
		LA-W918-5									Increase 2	Increase 0.01			2	0.01	176	1.32

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.10	Elemental Mercury	LA-W920-0	45	0.50											45	0.50		
		LA-W920-4					Increase 20	Increase 0.02							20	0.02		
		LA-W920-5									Increase 9	Increase 0.02			9	0.02	74	0.54
3.2.1	Halogenated Organic Liquids	LA-W907-0	385	16.58							Decrease 1	Decrease 0.0025			384	16.58		
		LA-W907-4					Increase 97	Increase 1.05							97	1.05		
		LA-W907-5							Increase 13	Increase 0.04	Increase 18	Increase 0.45			31	0.49	512	18.12
3.2.1	Nonhalogenated Organic Liquids	LA-W908-0	275	14.34											275	14.34		
		LA-W908-4					Increase 409	Increase 3.38							409	3.38		
		LA-W908-5							Increase 53	Increase 0.08	Increase 77	Increase 2.83			130	2.91	814	20.63

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Bulk Oils	LA-W909-0	28	3.75											28	3.75		
		LA-W909-4					Increase 8	Increase 1.48							8	1.48		
		LA-W909-5									Increase 28	Increase 2.28			28	2.28	64	7.51
3.2.1	PCB Wastes with RCRA Components	LA-W910-0	4	0.74											4	0.74	4	0.74
3.2.1	Liquid and Solid Oxidizers	LA-W923-0	55	0.20							Decrease 49	Decrease 0.0834			6	0.117		
		LA-W923-4					Increase 67	Increase 0.145							67	0.145		
		LA-W923-5							Increase 24	Increase 0.32	Decrease 11	De - crease 0.0034			13	0.317	86	0.58
3.3	Lead Waste - TBD	LA-W924-0	186	51.44					Decrease 57	Decrease 11.28					129	40.16	129	40.16
3.3	Mercury Wastes - TBD	LA-W925-0	63	18.30											63	18.30		
		LA-W925-4					Increase 37	Increase 0.42							37	0.42		
		LA-W925-5									Increase 14	Increase 1.52			14	1.52	114	20.24
3.3	Compressed Gases - TBD	LA-W926-0	10	1.25											10	1.25	10	1.25

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Biochemical Laboratory Wastes	LA-W927-0	9	1.34											9	1.34	9	1.34
3.3	Dewatered Treatment Sludge	LA-W928-0	1288	268.17	Decrease 1227	Decrease 255.46									61	12.71	61	12.71
3.4.1	Lead for Surface Decontamination	LA-W930-0	125	56.20					Decrease 83	Decrease 14.43[f]			Decrease 6	Decrease 8.34[d]	36	33.43		
		LA-W930-5							Increase 109	Increase 22.50	Increase 6	Increase 1.25			115	23.75	151	57.18
3.4.2	Nonradioactive or Suspect Waste Items to be Surveyed	LA-W929-0	1250	14.24			Decrease 1196 Decrease 41	Decrease 13.97 Decrease 0.26[d]	~~Decrease 4~~	~~Decrease 0.002~~[h]	Decrease 2 Decrease 9	Decrease 0.00094 Decrease 0.0029			2	0.0076[g]		
		LA-W929-5							Increase 1	Increase .00002					1	0.00002	3	0.0076[g]
None	Lead Requiring Sorting	LA-W931-0	48	9.97					Decrease 22	Decrease 4.58	Decrease 3	Decrease 0.63			23	4.76		
		LA-W931-5							Increase 28	Increase 5.73	Decrease 28 Increase 8	Decrease 5.73 Increase 0.44			8	0.44	31	5.20

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

CPV Section	Treatability Group	MWIR ID (by subgroup)	October 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Explosives	LA-W932-0	0	0.00											0	0.00		
		LA-W932-4					Increase 1	Increase 0.000001							1	0.000001	1	0.000001
3.3	Lab Packs	LA-W933-0	0	0.00											0	0.00		
		LA-W933-4					Increase 114	Increase 0.17							114	0.17		
		LA-W933-5									Increase 28	Increase 0.13			28	0.13	142	0.30

CPV Section	Category	MWIR ID (by substream)	October, 1995 CPV Inventory		Revision 2 Inventory Changes		Revision 4 Inventory Changes		Revision 5 (3/96 FY95 Update Changes)		Revision 5 (3/97 FY96 Update Changes)		Revision 5 (Other Changes)		Subtotal (by substream)		Net Covered Waste Inventory[a] (including Rev. 4/5 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.5	Missing/ non-existent/ TBV	NONE											Increase 1 Increase 41 Increase 6	Increase 0.2082[d] Increase 0.26[d] Increase 8.34[d]			48	8.81

TABLE B-2. SUMMARY TABLE
PREVIOUSLY REPORTED STP/CPV MLLW INVENTORY CHANGES (THROUGH REV. 4/5)

NOTES:

[a] Changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY96; however, only those reported as Rev. 5.0 "*Other Changes*" are included in this table. All others will be reported in the March, 1998 FY97 *Annual Update* and associated revision request. Therefore, the *"Net Covered Waste Inventory"* may not fully reflect the ACTUAL CPV covered waste inventory as of the date of this revision, in some instances.

[b] As reported in DOE's January 31, 1997 letter, the volume associated with the 104th LA-W901-0 item (0.0005 m^3) was repackaged, and bulked with other LA-W906 wastes in 1991, prior to issuance of the original STP. Since this "*missing*" item has now been located, its volume is being formally transferred to LA-W906 and will be managed as such.

[c] The 4.11 m^3 volume shown for LA-W901, and the 0.13m^3 volume shown for LA-W902 are corrections, to reflect the actual volumes shipped in FY96. As reported in the March, 1997 FY96 *Annual Update*, the volume changes for LA-W901 and LA-W902 in FY96 were based on current data in LANL's waste database. They are consistent with the original documentation submitted by the waste generator, and they are representative of actual volumes of these wastes when shipped for treatment. The volumes used during the preparation of the original STP were erroneous, thereby resulting in more waste being shipped than reported in the original STP inventory. This volume inconsistency was discussed in DOE's January 31, 1997 letter.

[d] These items from LA-W904, LA-W929, and LA-W930 have been determined to be missing or nonexistent. They are being transferred to the category *"Missing/Nonexistent/TBV"* until their presence or absence are fully and finally verified.

[e] Although a number of changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY96, only those reported here as Rev. 5.0 "*Other Changes*" are included in this table. These represent additional waste items that became covered waste after the end of FY96, for which opportunities exist for treatment during FY98. All other covered waste inventory changes since the end of FY96 will be reported in the March, 1998 FY97 *Annual Update.*

[f] This represents a correction to the March, 1996 FY95 *Annual Update* for LA-W930, which had reported that 84 items (14.64 m^3) had been 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.

[g] Two items in the original STP inventory for LA-W929, *Sort, Survey, and Decontamination*, were shipped to DSSI for treatment on December 18, 1996. This change in the covered waste volume will be reflected in the March,1998 FY97 *Annual Update,* and will be deleted from the CPV inventory in the associated revision. Therefore, these two items were reported as treated in the various submittals associated with Revision 4 of the STP, but were reported in the March, 1997 FY96 *Annual Update* (and are shown here) as having been in inventory as of September 30, 1996.

[h] This represents a correction to the March, 1996 FY95 *Annual Update*. It was reported that one LA-W922 item (0.0002 m^3) and 4 LA-W929 items (0.002 m^3) had been removed from inventory. This was incorrect because these items had been repacked into different containers, and are still in inventory.

[i] For LA-W906, Rev. 5.0 (Other Changes), the correct volume associated with this increase is 4.26 m^3 for LA-W904, Rev. 5.0 (Other Changes), the correct decrease is 0.105 m^3. Both of these corrrections are discussed and implemented in Rev 6.0.

EXHIBIT A

LOS ALAMOS NATIONAL LABORATORY

MIXED WASTE SITE TREATMENT PLAN

COMPLIANCE PLAN VOLUME (CPV)

BACKGROUND VOLUME

Revision ~~4.0 and 5.0~~ 6.0

~~December 1997~~ July 1998

(Rev. ~~4.0 and 5.0 12/97~~ 6.0 7/98)

1.0 PURPOSE AND SCOPE OF THE COMPLIANCE PLAN VOLUME

1.1 Introduction

On October 6, 1992, Congress passed the Federal Facility Compliance Act (FFC Act) to address compliance by the United States Department of Energy (DOE) with the land disposal restrictions (LDR) for the storage of mixed waste set forth in Section 3004(j) of RCRA. The FFC Act requires the DOE to submit a Site Treatment Plan (STP) for developing treatment capacities and technologies to treat all of the facility's mixed waste, regardless of the time generated, to the standards promulgated pursuant to Section 3004(m) of RCRA. The FFC Act provides that the appropriate regulatory authority, the New Mexico Environment Department (NMED), may approve, approve with modifications or disapprove the STP. Prior to making such a determination, NMED is required by FFC Act to provide public notice, consider public comments, consult with the Environmental Protection Agency (EPA) and any other state in which a facility affected by the STP is located.

On March 31, 1995, DOE submitted its proposed STP to NMED for the treatment of mixed waste at the Los Alamos National Laboratory (LANL). On April 17, 1995, the public was given notice of and an opportunity to comment to NMED on the draft STP submitted by DOE. After considering public comment and otherwise complying with the FFC Act, NMED determined to approve the draft STP with modifications as provided in this document.

The STP is intended to fulfill the requirements of the FFC Act and establish an enforceable framework to allow DOE and the Regents of the University of California (Respondents) to achieve full compliance with LDR requirements under the New Mexico Hazardous Waste Act (HWA) and RCRA. The compliance dates set forth herein are enforceable time periods in which Respondents are required to develop treatment capacities and technologies, and treat or otherwise meet the requirements set forth for LDR under the HWA and RCRA. The STP will be fully implemented by a Compliance Order issued by NMED on or before October 6, 1995.

1.2 Contents

The STP contains two volumes and is intended to bring Respondents into compliance with LDR storage prohibitions under the HWA and RCRA. The Compliance Plan Volume of the STP provides overall schedules, including compliance dates, for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The Compliance Plan includes a schedule for the submittal of applications for permits, construction of treatment facilities, technology development, off-site transportation for treatment, and the treatment of mixed wastes in full compliance with the HWA and the implementing regulations at 20 NMAC 4.1, which

incorporates by reference 40 CFR Parts 260 through 270. The Background Volume of the STP contains progress reports as required in the Compliance Order. Respondents shall carry out the activities described in the STP, including the Compliance Plan Volume of the STP, in accordance with the schedules and requirements set forth in the STP and the Order.

1.3 STP Revisions and Amendments

The STP Compliance Plan Volume (CPV) has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order (FFCO), as amended and revised. Appendix A to the CPV provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

2.0 Compliance Schedules

The STP provides overall schedules for achieving compliance with LDR storage and treatment requirements for mixed waste at LANL. The schedules include those activities required to bring existing waste treatment technologies into operation, process backlogged and currently generated waste, include schedules required to develop new facilities and capacity for treatment and establish an overall time frame for achieving compliance with the LDR requirements under the HWA and 20 NMAC 4.1.

2.1 Categories of Activities for Compliance Dates

The categories of activities for which compliance dates will be provided for different types of treatment approaches in the STP are listed in the tables below. The categories of activities are based on Section 3021(b)(1)(B)(I), (ii), and (iii) of the RCRA, to the extent appropriate.

2.1.1 Plans Where Treatment Technology Exists

For most of the mixed waste, treatment technologies have been identified and developed. For the waste that will be treated on-site, the categories of activities for compliance dates identified in Table I shall apply. Compliance dates for the activities identified in Table I may be found in Section 3.1.

Table I. Categories of Activities for Compliance for Mixed Waste with Existing Treatment Technologies.

A.	Submit permit applications to the NMED.
B.	Initiate construction as specified in the NMED permit.
C.	Complete system testing and commence operation.
D.	Begin treating mixed waste.
E.	Complete treatment of existing wastes to applicable regulatory standards.

2.1.2 Plans Where Technology Must Be Developed

For some mixed waste, no treatment technologies have been identified and developed, or the treatment technology must be modified or adapted to apply to such waste. For the waste that will be treated on-site, the categories of activities for compliance dates are identified in Table II and shall apply. Compliance dates for the activities identified in Table II may be found in Section 3.2.

Table II. Categories of Activities for Compliance Dates for Mixed Waste Without Existing Treatment Technologies.

A. Identify and develop technology.
B. Submit permit application to NMED; or
C. Submit a Notification of Intent to perform treatability study to NMED a minimum of 45 days prior to commencement of the study.
D. Initiate construction as specified in the NMED.
E. Commence systems testing.
F. Begin treating mixed waste.
G. Complete treatment of existing wastes to applicable regulatory standards.

2.1.3 Requirements Pertaining to Radionuclide Separation

The FFC Act sets additional requirements in cases in which DOE intends to conduct radionuclide separation of mixed waste. Should the DOE determine to do radionuclide separation of such mixed waste, DOE will schedule specific compliance dates based on category activities identified in Table III. "Radionuclide separation" shall mean segregating the radioactive portion of the mixed waste from the hazardous portion of the mixed waste.

Table III. Categories of Activities for Compliance Dates for Radionuclide Separation of Mixed Waste

A.	Complete an estimate of the volume of waste generated by each case of radionuclide separation.
B.	Complete an estimate of the volume of waste that would exist or be generated without radionuclide separation.
C.	Complete an estimate of the costs of waste treatment and disposal if radionuclide separation is used compared with the estimated costs if it is not used.
D.	Provide the assumptions underlying such estimates of waste volumes and cost estimates.
E.	Provide characterization methodologies for determining waste type.
F.	Submit a plan for treating or managing hazardous waste residues, accompanied by a NMED permit application.

2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment

In lieu of plans to treat mixed-waste on-site, DOE may treat waste at an off-site facility (at a commercial or non-commercial mixed waste treatment facility), or DOE may recycle waste at an off-site facility. Should DOE elect to use off-site recycling facilities in lieu of (or in combination with) treatment, it will follow the requirements prescribed in this Section in the same manner as if the waste was being shipped off-site for treatment. Any and all requirements

imposed by the off-site treatment/recycling facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment/recycling site shall be met by Respondents.

DOE shall notify the NMED Project Manager in writing as soon as possible if mixed waste is planned to be sent to a non-commercial facility. Notification should be made if possible when DOE is first considering such an option to allow NMED and the state to address any state issues or concerns with other states. The NMED Project Manager shall approve in writing the proposed off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility. Activities for mixed waste to be shipped off-site for treatment/recycling at a non-commercial facility are identified in Table V.

Should DOE decide to treat or recycle waste at a commercial off-site facility, DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility.

Table IV. Activities for Mixed Waste to be Shipped Off-Site for Treatment or Recycling at a Commercial facility

A.	Meet all regulatory requirements for off-site shipment.
B.	Provide documentation to NMED that waste has been received at an off-site facility for treatment or recycling within 45 working days of receipt of waste at the treatment facility.

2.1.4.1 Specific Site Requirements for Non-commercial Treatment Facilities

Shipment to Idaho National Engineering Laboratory

Prior to shipment, Idaho National Engineering Laboratory and Idaho Division of Environmental Quality shall be notified of any pending shipments of waste prior to shipment should DOE ship mixed low-level waste to INEL. Proper procedures including additional approvals (if necessary) and documentation shall be completed prior to the shipment of wastes to INEL. Management of post-treatment waste residuals or newly generated waste streams will be in accordance with the requirements of DOE, the State of Idaho and that state where they will be disposed. A modification to LANL's RCRA permit providing for the return of such wastes and/or residues to LANL must be approved by NMED prior to any such return of wastes and/or residuals to LANL. DOE will notify the NMED Project Manager in writing as soon as possible, and in any

event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams from INEL.

Shipments of low-level mixed wastes to planned facilities (not yet existing) will occur only after that treatment and schedules are approved by DOE-ID and the State of Idaho. Upon approval of the planned treatment facilities, the applicable protocol from the paragraph above will be implemented for mixed wastes to be treated at planned facilities.

Shipment to Oak Ridge Reservation

In the case that Oak Ridge Reservation (ORR) may not dispose of mixed-waste residues or new waste streams generated from off-site treatment, and they cannot be sent to another facility for disposal, then the residues may return to LANL. Should residual or newly generated waste streams be returned to LANL, the proper permits for the State of New Mexico must exist. DOE will notify the NMED Project Manager in writing as soon as possible, and in any event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams from ORR.

Table V. Activities for Mixed Waste to be Shipped Off-Site for Treatment or Recycling at a Non-commercial facility

A.	Request necessary approval from NMED for shipment of waste by category before shipping.
B.	Meet all regulatory requirements for off-site shipment.
C.	Provide documentation to NMED of confirmation of shipment date within 14 working days prior to sending waste to an off-site facility for treatment, disposal, or recycling, or storage pending treatment, disposal, or recycling.
D.	Provide documentation to NMED that waste has been received at an off-site facility for treatment within 45 working days of receipt of waste at the off-site facility.
E.	Meet all regulatory requirements to include RCRA Permit modifications for residual or newly generated waste streams after treatment or recycling.
F.	Provide documentation to NMED within 30 working days after receipt of residual or newly generated waste streams upon return to LANL.

2.1.5 Plans Related to Other Mixed Waste Activities

1. Activities other than the types of activities specifically called for in the FFC Act as requiring schedules are described in this STP. Some of these activities may be associated

with schedules which may contain compliance dates related to treatment of the DOE's mixed waste.

2. For mixed waste which is not sufficiently characterized to allow identification of appropriate treatment, notification of the characterization of such waste shall be in accordance with the annual update process described in the Compliance Order. If such characterization results in the addition or deletion of a treatability group or an increase in volume in a treatability group, a revision would be required pursuant to Section X of the Compliance Order.

3.0 LOW-LEVEL MIXED WASTE STREAMS

This Chapter presents proposed schedules for treatment technologies and the preferred options to treat low-level mixed waste streams (MLW or LLMW) at LANL. All preferred options not described below must be approved by NMED in accordance with the revision process pursuant to the Compliance Order.

The original October 4, 1995 STP inventory in each MLLW treatability group has been modified through the revision process in the FFCO. The table in CPV Appendix B provides a comprehensive summary of changes to the CPV covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of this revision. In Appendix B, the original STP inventory in each MLLW treatability group is denoted as subgroup 0 of that treatability group (e.g., the original volume of STP treatability group LA-W906 became LA-W906-0). Each revision that has since added volumes to individual treatability groups has resulted in creation of an additional subgroup, having the same number as the revision (e.g., LA-W906-4 was created in Revision 4.0, and LA-W906-5 was created in Revision 5.0).

In most Sections of this chapter, the subgroups of the treatability groups are not shown. In those cases, the Activities and Compliance Dates are applicable to the entire net volume of that treatability group. However, when subgroups of a treatability group have been assigned Activities and Compliance Dates unique to that subgroup, those subgroups are detailed in the text. For a complete listing of volumes by subgroup for all treatability groups, please refer to Appendix B.

3.1 Mixed Waste Streams for Which Technology Exists

The following subsections summarize LLMW treatability groups for which technology exists.

3.1.1 Off-site Treatment by Thermal Treatment

Treatability Group(s):

LLMW for ~~Off-site~~ Thermal Treatment (MWIR Treatment ID DS-S001)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
IPA wastes	LA-W901	D001, D009, F002, F003, F005	0 ~~7~~	0.00 ~~0.02~~
scintillation fluids	LA-W902	D001, F003, F005	0 ~~1~~	0.00 ~~0.0038~~
Totals			**0 ~~8~~**	**0.00 ~~0.02~~**

Treatment Technology:

The waste will be treated at an off-site facility that combusts organic liquid waste. Should DOE decide to treat waste at an off-site non-commercial facility, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	9/30/96
B. Complete shipping waste	12/30/96
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.2 Off-site Treatment by Stabilization or Macroencapsulation

Treatability Group(s):

LLMW for Stabilization

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (M^3)
lead blankets	LA-W903	D007, D008	0	0.00
soil with heavy metals	LA-W904	D004, D005, D006, D007, D008, D009, D010, D011	3 ~~59~~	0.45 ~~10.44~~ ~~10.54~~[a]
ER soils	LA-W905	D028, D029, F001, F005 D010, D011	0	0.00
Totals			3 ~~59~~	0.45 ~~10.44~~ ~~10.54~~[a]

~~[a] These redlined and struckout values represent corrections to CPV Revision 5.0 as discussed in the request for Revision 6.0. The struckout numbers are the incorrect Revision 5.0 values, the redline and struckout numbers are the corrected Revision 5.0 values which are replaced by the Revision 6.0 values (redline only). This footnote is information for the reader of this redline/strikeout version; this footnote is struck out to ensure it is deleted in the clean copy of the CPV Revision 6.0.~~

Treatment Technology:

The waste will be treated at an off-site facility that stabilizes or macroencapsulates wastes. Should DOE decide to treat waste at an off-site non-commercial facility, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Activity	Compliance Dates
A. Meet all regulatory requirements prior to shipping waste	05/30/97
B. Complete shipping waste	12/30/98
C. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.3 Evaporative Oxidation (MWIR Treatment ID GJ-S801C)

Treatability Group(s):

LLMW for Evaporative Oxidation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906-0 LA-W906-4 LA-W906-5	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D030, D032, D033, D034, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	173	10.32[a] ~~10.89~~
Totals			**173**	**10.32[a]** ~~**10.89**~~

[a] ~~These redlined and struckout values represent corrections to CPV Revision 5.0 as discussed in the request for Revision 6.0. The struckout numbers are the incorrect Revision 5.0 values and the redline numbers are the corrected Revision 5.0 values. This footnote is information for the reader of this redline/strikeout version; this footnote is struck out to ensure it is deleted in the clean copy of the CPV Revision 6.0.~~

Note: See below for additional wastes in this treatability group

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site treatment facility (commercial or non-commercial) and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	12/30/96
B. Initiate construction	As specified in the NMED permit.
C. Complete system test and commence operation and begin treating mixed waste	6/19/99
D. Complete treatment of existing wastes to applicable regulatory standards, or	2/09/00
E. Complete shipment of existing wastes for treatment to an off- site facility.	2/09/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes

The following additional wastes will require management in this category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous organic liquids	LA-W906-6	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D030, D032, D033, D034, D036, D037, D038, D039, D041, D042, D043, F001, F002, F003, F004, F005	88	5.74
Totals			**88**	**5.74**

Activities for wastes belonging to this treatability subgroup.

Activity	Compliance Dates
G. Complete shipment of existing wastes for treatment to an off- site facility.	2/09/03
H. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.4 Thermal Desorption (MWIR Treatment ID GJ-S801B)

LLMW for Thermal Desorption/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
organic-contaminated combustible solids	LA-W911	D001, D004, D008, D009, F001, F002, F003, F005	381 ~~378~~	36.07 ~~35.65~~
Totals			**381 ~~378~~**	**36.07 ~~35.65~~**

LLMW for Thermal Desorption

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
organic-contaminated noncombustible solids	LA-W919	D001, D003, D004, D005, D006, D007, D008, D009, D010, D011, D012, D015, D018, D019, D020, D022, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D042, D043, F001, F002, F003, F004, F005	227 ~~177~~	27.31 ~~18.62~~
Totals			**227 ~~177~~**	**27.31 ~~18.62~~**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	11/16/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	02/01/01
D. Complete treatment of existing wastes to applicable regulatory standards, or	02/14/02
E. Complete shipping of existing wastes to an off-site treatment facility.	02/14/02
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.5 Macroencapsulation (MWIR Treatment ID PX-S803)

Treatability Group(s):

LLMW for Macroencapsulation/Off-site treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
combustible debris	LA-W912	D001, D002, D003, D005, D006, D007, D008, D009, D011, D035, F001, F002, F003, F005	103 ~~97~~	15.17 ~~14.85~~
Totals			**103 ~~97~~**	**15.17 ~~14.85~~**

LLMW for Macroencapsulation

Treatability group		RCRA codes	Number of items	Net volume (m^3)
activated or inseparable lead	LA-W921	D008	34 ~~32~~	7.09 ~~8.12~~
noncombustible debris	LA-W922	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011	191 ~~157~~	36.46 ~~30.74~~
Totals			**225 ~~189~~**	**43.55 ~~38.86~~**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/04/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operation and begin treating mixed waste	02/01/00
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/25/00
E. Complete shipping of existing wastes to an off-site treatment facility.	08/25/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.6 Chemical Plating Waste Treatment Skid (MWIR Treatment ID LA-S004)

Treatability Group(s):

LLMW for Chemical Plating Waste Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
aqueous wastes with heavy metals	LA-W913	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011	139 ~~119~~	3.07 ~~2.05~~
corrosive solutions	LA-W914	D001, D002	197 ~~189~~	1.21 ~~1.17~~
aqueous cyanides, nitrates, chromates, and arsenates	LA-W915	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, F007, P029, P098	23	0.17
Totals			**359 ~~331~~**	**4.45 ~~3.39~~**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the

affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Resubmit revised permit application to NMED	10/30/96
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	03/17/00
D. Complete treatment of existing wastes to applicable regulatory standards, or	05/08/01
E. Complete shipping of existing wastes to an off-site treatment facility.	05/08/01
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.7 Water-reactive Metals Treatment Skid (MWIR Treatment ID LA-S003)

Treatability Group(s):

LLMW for Water-Reactive Metals Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
water-reactive wastes	LA-W916	D001, D003, D004, D005, D007, D008, D010, D011	113 ~~108~~	7.05 ~~6.37~~
Totals			**113 ~~108~~**	**7.05 ~~6.37~~**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	06/30/01
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	09/09/03
D. Complete treatment of existing wastes to applicable regulatory standards, or	04/21/04
E. Complete shipping of existing wastes to an off-site treatment facility.	04/21/04
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.8 Gas-scrubbing Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas-Scrubbing Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
compressed gases requiring scrubbing	LA-W917	D001, D002, P056	13	0.35
Totals			**13**	**0.35**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/28/03
E. Complete shipping of existing wastes to an off- site treatment facility.	08/28/03
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.9 Gas Oxidation Skid (MWIR Treatment ID LA-S801)

Treatability Group(s):

LLMW for Gas Oxidation Skid/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
compressed gases requiring oxidation	LA-W918	D001, U226	177 ~~176~~	1.32
Totals			**177 ~~176~~**	**1.32**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated on-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	03/10/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	05/10/02
D. Complete treatment of existing wastes to applicable regulatory standards, or	08/28/03
E. Complete shipping of existing wastes to an off-site treatment facility.	08/28/03
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.1.10 Mercury Amalgamation (MWIR Treatment ID PI-S801)

Treatability Group(s):

LLMW for Amalgamation/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
elemental mercury	LA-W920	D006, D009, F005	79 ~~74~~	0.66 ~~0.54~~
Totals			**79 ~~74~~**	**0.66 ~~0.54~~**

Treatment Technology

The waste will be treated in a mobile treatment unit that will be fabricated off-site and operated on-site. Shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activity	Compliance Dates
A. Submit permit application, amendment or modification to NMED	01/30/98
B. Initiate construction	As specified in the NMED permit
C. Complete system testing and commence operations and begin treating mixed waste	06/05/00
D. Complete treatment of existing waste to applicable regulatory standards, or	11/15/00
E. Complete shipping of existing wastes to an off-site treatment facility.	11/15/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.2 Mixed Waste Streams for Which Technology Requires Adaptation or for Which No Technology Exists

The following subsections summarize mixed waste streams for which technology requires adaptation or for which no technology exists.

3.2.1 Hydrothermal Processing

Treatability Group(s):

LLMW for Hydrothermal Processing/Off-site Treatment (preferred option)

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
halogenated organic liquids	LA-W907	D001, D002, D003, D007, D009, D010, D011, D018, D019, D022, D028, D029, D035, D043, F001, F002, F003, F004, F005, U077, U080, U226, U227, U228, U236	525 ~~512~~	18.26 ~~18.12~~
nonhalogenated organic liquids	LA-W908	D001, D002, D003, D004, D007, D008, D009, D011, D018, D038, D040, F002, F003, F004, F005, U002, U019, U154, U169, U188, U220, U246	843 ~~814~~	20.20 ~~20.63~~
bulk oils	LA-W909	D002, D004, D005, D006, D007, D008, D009, D010, D011, D021, D027, D039, F001, F002, F003, F005	45 ~~64~~	5.81 ~~7.51~~
PCB wastes with RCRA components	LA-W910	D004, D005, D006, D007, D008, D009, D010, D011, D012, D015, D019, D027, D028, D030, D031, D032, D033, D034, D036, D039, D042, D043, F002, F003, F004, F005	40 ~~4~~	2.75 ~~0.74~~
Totals			**1453 ~~1394~~**	**47.02 ~~47.00~~**

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
Liquid and solid oxidizers	LA-W923	D001, D003, D005	93 ~~86~~	1.37 ~~0.58~~
Totals			**93 ~~86~~**	**1.37 ~~0.58~~**

Treatment Technology:

The preferred destruction treatment technology option for this treatability group is Hydrothermal Processing which is a technology that needs development for adaptation to treat radioactive and PCB-bearing waste. This treatment technology is being adapted at LANL and is expected to be developed into a mobile treatment unit. The GJPO schedule for deployment of the unit indicates its possible availability to LANL after February 2002. Shipment off-site for treatment is a parallel preferred option. Respondents shall submit treatment or off-site shipment schedules and

options for NMED's approval by November 30, 1998. Treatment or other options other than off-site shipment shall be carried out pursuant to the revision process. Off-site shipments must be completed by February 2002.

Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

3.3 Mixed Waste Requiring Further Characterization or for Which Technology Assessment Has Not Been Done (MWIR Treatment ID LA-S701)

Treatability Group(s):

Treatability group	MWIR waste ID	RCRA codes	Number of items	Net volume (m^3)
lead wastes - TBD	LA-W924	D003, D008	129	40.16
mercury wastes - TBD	LA-W925-0	D007, D008, D009, F001	63	18.30
compressed gases - TBD	LA-W926	D001, D007, D009, D022, P056, U080, U226	10	1.25
biochemical laboratory wastes	LA-W927	D001, D003	9	1.34
dewatered treatment sludge	LA-W928	see Subsection 3.3 in the Background Volume	61	12.71
Totals			**272**	**73.76**

Note: See below for additional wastes in some of these treatability groups

Treatment Technology:

The following steps will be taken to properly characterize this waste:

- Conduct additional generator interviews
- Prepare a sampling plan for waste not adequately characterized

- Conduct sampling and analysis
- Determine treatment options

Activities for wastes originally belonging to these treatability groups as listed above.

Activity	Compliance Dates
A. Complete generator interviews	10/30/95
B. Complete sampling and analysis plan	1/30/96
C. Complete sampling and analysis	9/30/98
D. Complete determination of treatment options	12/20/98
E. Complete shipping of existing wastes to an off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups.	12/20/00
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes and treatability groups:

The following additional wastes will require management in this category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	RCRA Codes	Number of items	Net volume (m3)
mercury wastes-TBD	LA-W925-4 LA-W925-5 LA-W925-6	D003, D007, D008, D009, F001, F002, F005	74 ~~37~~	2.61 ~~0.42~~
~~mercury wastes-TBD~~	~~LA-W925-5~~	~~D007, D008, D009, F001~~	~~14~~	~~1.52~~
explosives	LA-W932	D003	1	0.000001
labpacks	LA-W933	D001, D002, D003, D004, D005, D006, D007, D008, D010, F003, F005, D011, P012, P029, P098, P106, P113, P120, U131, U144, U145, U188, U190, U204, U216, U219	149 ~~142~~	0.30
Totals			**224 ~~194~~**	**2.91 ~~2.24~~**

Activities for wastes belonging to these treatability groups and subgroups.

Activity	Compliance Dates
G. Complete sampling and analysis plan	1/30/99
H. Complete sampling and analysis	9/30/01
I. Complete determination of treatment options	12/20/01
J. Complete shipping of wastes to an off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups	12/20/03
K. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at off-site facility

3.4 Plans for Other Types of Activities

The following subsection summarizes plans for other types of activities.

3.4.1 Lead Decontamination (MWIR Treatment ID LA-S001)/Off-site Treatment (preferred option)

Treatability Group(s):

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net volume (m^3)	No. Items	Net volume (m^3)	No. Items	Net volume (m^3)
lead for surface contamination	LA-W930-0 LA-W930-5	0 — ~~89 – 6~~ [a]	0.00 ~~21.02~~ ~~6.59~~ [a]	134 ~~62~~ ~~145~~ [a]	49.19 ~~36.16~~ ~~50.59~~ [a]	134 ~~151~~	49.19 ~~57.18~~
Totals		0 — ~~89 – 6~~ [a]	**0.00** ~~**21.02**~~ ~~**6.59**~~ [a]	**134** ~~**62**~~ ~~**145**~~ [a]	**49.19** ~~**36.16**~~ ~~**50.59**~~ [a]	**134** ~~**151**~~	**49.19** ~~**57.18**~~

~~[a] These redlined and struckout values represent corrections to CPV Revision 5.0 as discussed in the request for Revision 6.0. The struckout numbers are the incorrect Revision 5.0 values, the redline and struckout numbers are the corrected Revision 5.0 values which are replaced by the Revision 6.0 values (redline only). This footnote is information for the reader of this redline/strikeout version; this footnote is struck out to ensure it is deleted in the clean copy of the CPV Revision 6.0.~~

Note: See below for additional wastes in this treatability group

Treatment Technology:

This treatability group contains two categories of lead for decontamination:

The first category is lead in the original LA-W930-0 inventory that is amenable to decontamination in the on-site lead decontamination trailer, which was designed to decontaminate simple lead shapes, such as lead bricks, of certain physical dimensions. The trailer is on-site and has operated, but needs an upgrade for prolonged operation.

The lead in the second category is lead in the original LA-W930-0 inventory that is not amenable to decontamination in the on-site lead decontamination trailer, plus subsequent additions to the original inventory shown in Appendix B. This lead will be processed using other on-site decontamination processes, such as dry sandblasting or hand-scrubbing, or sent to off-site lead decontamination services.

Any lead not acceptable for on-site or off-site lead decontamination, plus any lead unsuccessfully decontaminated, will be designated for treatment and disposal at an off-site facility, or for recycle through an off-site capability, such as metal melting to create shielding blocks or a DOE lead bank. Non-conforming items will be reassigned to appropriate treatability groups in accordance with the FFCO.

Should DOE decide to treat or recycle waste at an off-site non-commercial facility in lieu of plans to treat or recycle such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment/recycle option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment/ recycling facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment/recycling site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment/recycling facility.

Lead shapes and forms in the first category.

Activity	Compliance Date
A. Complete lead decontamination	09/30/97

Lead shapes and forms in the second category.

Activity	Compliance Date
A. Provide schedule for development of lead processing techniques and options	06/30/96
B. Segregate lead waste into decontamination groupings	07/31/97
C. Complete shipment of wastes to decontamination operations, or	12/02/98
D. Determine treatment/disposal or other recycle options for lead waste not acceptable for decontamination	12/02/98
E. Complete treatment/disposal operations or other recycle operations for lead waste not acceptable for decontamination	07/31/99
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

Additional wastes

The following additional wastes will require management in the second category, according to the Activities and Compliance Dates listed below.

Treatability group	MWIR waste ID	First category		Second category		Total	
		No. Items	Net volume (m^3)	No. Items	Net volume (m^3)	No. Items	Net volume (m^3)
lead for surface contamination	LA-W930-6	0	0.00	14	12.06	14	12.06
Totals		**0**	**0.00**	**14**	**12.06**	**14**	**12.06**

Activities for wastes belonging to this treatability subgroup.

Activity	Compliance Date
G. Complete shipment of wastes to decontamination operations, or	12/02/99
H. Determine treatment/disposal or other recycle options for lead waste not acceptable for decontamination	12/02/99
I. Complete treatment/disposal operations or other recycle operations for lead waste not acceptable for decontamination	07/31/00
J. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

3.4.2 Sorting, Surveying, and Decontamination (MWIR Treatment ID GJ-S804)

Treatability Group(s):

Treatability group	MWIR waste ID	Number of items	Net volume (m^3)
1. nonradioactive or suspect waste items to be surveyed	LA-W929-0(1)	0	0.0
2. nonradioactive or suspect waste items to receive RCRA and radiological characterization	LA-W929-0(2)	0 ~~2~~	0.00 ~~0.0076~~
3. nonradioactive or suspect waste items that cannot or should not be sampled	LA-W929-0(3)	0	0.0
Totals		**0 ~~2~~**	**0.00 ~~0.0076~~**

Note: See below for additional wastes in this treatability group

Treatment Technology:

The waste items in part 1 of the original volume in this treatability group will be surveyed using a field operation that will survey waste suspect of radioactive contamination to determine whether it is radioactively contaminated. The work will be done on-site with equipment and staffing provided by LANL or another DOE site. Waste determined not to be radioactively contaminated will be treated using commercial facilities permitted to treat hazardous waste; waste determined to be radioactively contaminated will be assigned to applicable treatability groups and/or sent to offsite facilities for appropriate treatment.

Waste items in part 2 of this treatability group will be surveyed using complete RCRA and radiological sampling and characterization. Waste sampled under this alternative will be treated and disposed as low-level mixed waste; the waste will be assigned to applicable treatability groups and/or sent to off-site facilities for appropriate treatment based on the results of this characterization.

Sampling for this characterization alternative will be conducted in accordance with RCRA SW-846 methods. To ensure an adequate volume of waste material is available for sampling and to maximize the cost effectiveness of the sampling activities, some lab packed and other waste items may be bulked into larger volume containers; all RCRA waste codes will be transferred to the bulked wastes to ensure correct RCRA categorization is maintained. It may be found, when preparing a given drum for sampling, (for example, solid small volume waste items that cannot be sampled in accordance with EPA SW-846 methods) are in fact not amenable to sampling and should have been included in the item count for group 3 . If visual inspection so indicates, these waste items will be transferred to Group 3 and assigned to applicable treatability groups based on existing knowledge.

Waste items in part 3 of this treatability group which are confirmed not amenable to sampling (e.g., lead-acid batteries, spray paint cans) will be assigned to applicable treatability groups based on existing knowledge. It may be found, when inspecting a given drum, that some items can in fact be sampled in accordance with EPA SW-846 methods and should have been included in the item count for Group 2. If visual inspection so indicates, these waste items will be transferred to Group 2 and sampled accordingly.

Additional compliance dates will be proposed for any waste items in this treatability group found not to have available treatment/disposal options following a complete review of all survey, analytical, or visual inspection data obtained through these processes.

For all waste items in this treatability group, shipment off-site for treatment is a parallel preferred option. Should DOE decide to treat waste at an off-site non-commercial facility in lieu of plans to treat such waste on-site, the DOE shall notify the NMED Project Manager in writing as soon as possible and in any event within fourteen (14) working days after confirmation of a shipment date with the affected off-site facility. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE prior to any shipment by DOE.

Any and all requirements imposed by the off-site (commercial or non-commercial) treatment facility and state regulatory, federal regulatory or other regulatory requirements applicable at the treatment site shall be met by DOE. DOE will notify the NMED Project Manager in writing as soon as possible and in any event within (45) working days of receipt of waste at the treatment facility.

Activities for waste items in part 1 of this treatability group.

Activity	Compliance Dates
A. Complete field survey	10/30/96
B. Submit documentation declaring waste items as nonradioactive, or submit documentation assigning waste items to applicable treatability groups	2/28/97
C. Propose additional compliance dates if necessary	4/30/97

Activities for waste items in part 2 of this treatability group.

Activity	Compliance Dates
D. Complete RCRA and radiological sampling	1/28/97
E. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	2/28/97
F. Propose additional compliance dates if necessary	4/30/97

Activities for waste items in part 3 of this treatability group.

Activity	Compliance Dates
G. Complete visual verification	1/28/97
H. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	6/30/97
I. Propose additional compliance dates if necessary	9/30/97

Additional wastes:

Treatability group	MWIR waste ID	Number of items	Net volume (m^3)
Nonradioactive or suspect waste items	LA-W929-5	0 ~~1~~	0.00 ~~0.00002~~
Totals		**0 ~~1~~**	**0.00 ~~0.00002~~**

Activities for items added as subgroup 5 of this treatability group.

Activity	Compliance Dates
J. Submit documentation assigning waste items to applicable treatability groups or proposing off-site shipment dates	3/31/98
K. Propose additional Compliance Dates if necessary	3/31/98

3.5 Management of "Missing" Items.

Waste Category:

Category	MWIR waste ID	No. Items	Net volume (m^3)
Missing/nonexistent/TBV	None	48	8.81
Totals		**48**	**8.81**

Treatment Technology:

During visual inspections and sampling activities in support of STP waste work-off, occasionally an item cannot be found, or it is not located in the containers in which it is expected to be, according to the LANL data files for the waste item. In some instances, such items could not be verified as having ever been received in storage at LANL, and further follow-up investigations of the record files revealed that for various reasons, the waste items were never in fact generated, although on paper they were included in the original STP inventory.

In these instances, DOE and UC, and their contractors, perform a thorough inspection of both the physical inventories and the data files. When DOE and UC determine that an STP covered waste item does not exist, transfer of the item to the category called *"Missing/ nonexistent/TBV (*to be verified*)"*, is requested through the revision process associated with the next *Annual Update.*

DOE and UC will re-verify the absence of all *"Missing/ nonexistent/TBV"* items container-by-container, as each STP waste item is being sampled, repackaged, or otherwise prepared for on- or off-site treatment. The final verification that all *"Missing/ nonexistent/TBV"* items do not in fact exist will be completed by April 21, 2004, at which time all remaining MLLW items in the original STP inventory will have been treated. At that time, DOE and UC will request deletion of all items having been fully verified as missing or nonexistent.

At any time during the re-verification process, should any of these items be discovered to exist, NMED will be notified, and approval will be requested for assignment of the rediscovered items to the appropriate TG. If necessary, they will be assigned new Activities and Compliance Dates, in accordance with the terms of the FFCO.

The following steps will be taken to verify presence or absence of this waste:

Activity	Compliance Dates
A. Initiate re-verification process on a shipment-by-shipment basis	01/03/98
B. Complete re-verification process	04/21/04
C. Re-assign any existing items to appropriate treatability groups	04/21/04
D. Complete treatment of existing wastes to applicable regulatory standards, or	10/30/04
E. Complete shipping of existing wastes to an off-site treatment facility	10/30/04
F. Provide documentation to NMED that waste was received at off-site facility	Within 45 days of receipt of waste at treatment facility

4.0 MIXED TRANSURANIC WASTE

Treatment Group(s):

Assorted Mixed Transuranic Waste

Treatment Technology

Respondents are required to develop treatment technologies and treat mixed transuranic (MTRU) waste at LANL according to the schedule set forth below:

Activity	Compliance Date
A. Development of treatment technologies	June 30, 1999
B. Submit permit application amendment or modification to NMED for treatment of MTRU	December 31, 1999
C. Begin treating MTRU	Six (6) months after NMED permit issuance
D. Complete treatment of existing MTRU to applicable regulatory standards	December 31, 2010

The above schedule is not based on the assumption that WIPP will be a disposal option or that DOE will receive a variance from treatment standards for land disposal of MTRU waste to be disposed at WIPP. All revisions to compliance dates shall be in accordance with the procedures set forth in the compliance order.

CPV APPENDIX A
HISTORY OF STP REVISIONS AND AMENDMENTS

As discussed in CPV Section 1.3, the STP Compliance Plan Volume has been modified several times since it was originally issued, in accordance with the provisions of Section X, "*Revisions,*" and Section XI, "*Other Amendments to the STP,*" of the October 4, 1995 Federal Facility Compliance Order, as amended and revised. This Appendix provides a summary of these CPV changes, and of modifications to the FFCO since its issuance.

To date, there have been six revisions and two amendments to the CPV. In addition, the FFCO was amended once, on May 20, 1997. The following Table A-1 provides a summary of these changes. More detailed descriptions can be found in the CPV Update portion of each year's STP *Annual Update,* and the original correspondence requesting each change.

Table A-1. SUMMARY OF CHANGES TO THE CPV AND THE FFCO

Action	Document Modified	Effective Date	Effect on FFCO/STP
Rev. 1.0	STP/CPV	6/12/96	Added off-site treatment as a parallel preferred option for most MLLW treatability groups
Rev. 2.0	STP/CPV	12/9/96	Reduced volume of LA-W928 by approving reclassification of sludges as LLW
Amendment 1.0	STP/CPV	10/30/96	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Rev. 3.0	STP/CPV	1/27/97	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates
Amendment 1.0	FFCO	5/20/97	Modified FFCO Sections IV, V, IX, and X to streamline waste transfers and deletions
Amendment 2.0	STP/CPV	9/4/97	Extended CPV Activity 3.1.2B Compliance Date to 12/29/97
Rev. 4.0	STP/CPV	*12/29/97* ~~*(to be added)*~~	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added treatability groups, and deleted treated items
Rev. 5.0	STP/CPV	*12/29/97* ~~*(to be added)*~~	Added volumes reported in FY95 and FY96 *Annual Updates* (and certain other items) to several treatability groups, added Activities and Compliance Dates, added CPV Appendices, and deleted treated items
Rev. 6.0	STP/CPV	*(to be added)*	Added volumes reported in FY97 *Annual Update* to several treatability groups, added certain Activities and Compliance Dates, adjusted several original inventory volumes, transferred one LA-W929 item to a new treatability group, and deleted treated items

CPV APPENDIX B
SUMMARY OF CPV INVENTORY CHANGES

The following tables provide~~s~~ a comprehensive summary of changes to the CPV covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of this revision. The volumes given in the tables reflect changes to the individual MLLW treatability group volumes due to increases or decreases, as noted. Table B-1 reports the inventory changes arising from Revision 6.0, while Table B-2 reports the inventory changes previously approved.

Key to Reading the Subgroups

The original STP inventory in each MLLW treatability group is now denoted as subgroup -0 of that treatability group (e.g., the original volume of STP treatability group LA-W906 became LA-W906-0). The original October 4, 1995 STP inventory in each MLLW treatability group has been modified through the revision process in the FFCO. The following revisions have affected volumes in individual treatability groups to date:

Revision	Effect on Volumes
Rev. 2.0	Reduced volume of LA-W928
Rev. 3.0	Divided original volume of LA-W929 into three subgroups
Rev. 4.0	Transferred original volume of LA-W929 from three subgroups to other treatability groups, added new treatability groups
Rev. 5.0	~~Added~~ Increased and decreased volumes in ~~to~~ several treatability groups
Rev. 6.0	Increased and decreased volumes in several treatability groups, transferred the volume in LA-W929-5 to another treatability group

Each revision that has added volumes to individual treatability groups has resulted in creation of an additional subgroup of that treatability group, having the same number as the revision (e.g., LA-W906-4 was created in Revision 4.0, and LA-W906-5 was created in Revision 5.0).

Additions and Deletions to Date

To date, MLLW inventory increases and decreases have been incorporated into the covered waste inventories through Revisions 2.0, 4.0, ~~and~~ 5.0, and 6.0. Revision 2.0 incorporated decreases in treatability group LA-W928 due to deletion of covered waste items. Rev. 4.0 resulted in decreases to LA-W929 and increases in other TGs, primarily by transferring LA-W929 items to other TGs. Rev. 5.0 and 6.0 resulted in both additions to and deletions of covered waste volumes (i.e., increases and decreases) in a number of TGs. Therefore, the

Appendix B tables that follow~~s~~ show~~s~~ that subgroups -4, ~~and~~ -5, and -6 exist for some treatability groups, but not for all.

These ~~This~~ tables provide~~s~~ a master list of MLLW inventory changes presented in the *Annual Updates,* to enable users of the STP to track all changes in the LANL MLLW covered waste inventory that occurred since the original STP inventory was established in the October 4, 1995 FFCO/CPV.

Changes (additions or deletions) to the CPV covered waste inventory have occurred since the end of FY97 ~~FY96~~. However, only those reported as of Rev. 6.0 ~~5.0 "*Other Changes*"~~ are included in this table. All others will be reported in the next *Annual Update* and associated revision request. Therefore, the *"Net Covered Waste Inventory"* may not fully reflect the actual CPV covered waste inventory as of the date of this revision, in some instances.

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.1	IPA Wastes	LA-W901-0	7	0.02	Decrease 7	Decrease 0.02			0	0.00	0	0.00
3.1.1	Scintillation Fluids	LA-W902-0	1	0.0038	Decrease 1	Decrease 0.0038			0	0.00	0	0.00
3.1.2	Lead Blankets	LA-W903-0	0	0.00					0	0.00	0	0.00
3.1.2	Soil with Heavy Metals	LA-W904-0	58	~~10.33~~ 10.43[a]	Decrease 6 Decrease 2 Decrease 46 Decrease 2	Decrease 0.62[b] Decrease 0.42[c] Decrease 8.91 Decrease 0.14			2	0.34		
		LA-W904-5	1	0.11					1	0.11	3	0.45
3.1.2	ER Soils	LA-W905-0	0	0.00					0	0.00	0	0.00

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.3	Aqueous Organic Liquids	LA-W906-0	45	1.65					45	1.65		
		LA-W906-4	27	0.36					27	0.36		
		LA-W906-5	101	~~8.88~~ 8.31[d]					101	8.31		
		LA-W906-6	0	0.00	Increase 88	Increase 5.74			88	5.74	261	16.06
3.1.4	Organic-Contaminated Combustible Solids	LA-W911-0	305	28.10	Increase 2	Increase 0.42[c]			307	28.52		
		LA-W911-4	33	0.68					33	0.68		
		LA-W911-5	40	6.87					40	6.87		
		LA-W911-6	0	0.00	Increase 1	Increase 0.0038			1	0.0038	381	36.07
3.1.4	Organic-Contaminated Noncombus-tible Solids	LA-W919-0	79	7.71	Increase 1	Increase 0.11[e]			80	7.82		
		LA-W919-4	9	0.38					9	0.38		
		LA-W919-5	89	10.53					89	10.53		
		LA-W919-6	0	0.00	Increase 49	Increase 8.58			49	8.58	227	27.31

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.5	Combustible Debris	LA-W912-0	83	13.82					83	13.82		
		LA-W912-4	9	0.75					9	0.75		
		LA-W912-5	5	0.28					5	0.28		
		LA-W912-6	0	0.00	Increase 6	Increase 0.32			6	0.32	103	15.17
3.1.5	Activated or Inseparable Lead	LA-W921-0	14	4.77	Decrease 1 Decrease 2	Decrease 0.06[f] Decrease 1.72			11	2.99		
		LA-W921-5	18	3.35	Decrease 4	Decrease 0.83[f]			14	2.52		
		LA-W921-6	0	0.00	Increase 9	Increase 1.58			9	1.58	34	7.09
3.15	Non-combustible Debris	LA-W922-0	41	5.62	Decrease 14	Decrease 2.915			27	2.71		
		LA-W922-4	53	2.83					53	2.83		
		LA-W922-5	63	22.29	Decrease 3	Decrease 0.62			60	21.67		
		LA-W922-6	0	0.00	Increase 51	Increase 9.25			51	9.25	191	36.46

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.6	Aqueous Wastes with Heavy Metals	LA-W913-0	83	1.50					83	1.50		
		LA-W913-4	25	0.40					25	0.40		
		LA-W913-5	11	0.15					11	0.15		
		LA-W913-6	0	0.00	Increase 20	Increase 1.02			20	1.02	139	3.07
3.1.6	Corrosive Solutions	LA-W914-0	60	0.69					60	0.69		
		LA-W914-4	90	0.36					90	0.36		
		LA-W914-5	39	0.12					39	0.12		
		LA-W914-6	0	0.00	Increase 8	Increase 0.04			8	0.04	197	1.21
3.1.6	Aqueous Cyanides, Nitrates, Chromates, and Arsenates	LA-W915-0	9	0.13					9	0.13		
		LA-W915-4	3	0.002					3	0.002		
		LA-W915-5	11	0.04					11	0.04	23	0.17
3.1.7	Water-Reactive Wastes	LA-W916-0	78	6.03					78	6.03		
		LA-W916-4	26	0.31					26	0.31		
		LA-W916-5	4	0.03					4	0.03		
		LA-W916-6	0	0.00	Increase 5	Increase 0.68			5	0.68	113	7.05
3.1.8	Compressed Gases Requiring Scrubbing	LA-W917-0	13	0.35					13	0.35	13	0.35

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.1.9	Compressed Gases Requiring Oxidation	LA-W918-0	6	0.08					6	0.08		
		LA-W918-4	168	1.23					168	1.23		
		LA-W918-5	2	0.01					2	0.01		
		LA-W918-6	0	0.00	Increase 1	Increase 0.0002			1	0.0002	177	1.32
3.1.10	Elemental Mercury	LA-W920-0	45	0.50					45	0.50		
		LA-W920-4	20	0.02					20	0.02		
		LA-W920-5	9	0.02					9	0.02		
		LA-W920-6	0	0.00	Increase 5	Increase 0.12			5	0.12	79	0.66
3.2.1	Halogenated Organic Liquids	LA-W907-0	384	16.58	Decrease 3	Decrease 0.0076			381	16.57		
		LA-W907-4	97	1.05					97	1.05		
		LA-W907-5	31	0.49					31	0.49		
		LA-W907-6	0	0.00	Increase 16	Increase 0.15			16	0.15	525	18.26

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Nonhalogen-ated Organic Liquids	LA-W908-0	275	14.34	Increase 0[g] Decrease 4 Decrease 0[h]	Increase 0.076 Decrease 0.49 Decrease 0.11			271	13.82		
		LA-W908-4	409	3.38					409	3.38		
		LA-W908-5	130	2.91					130	2.91		
		LA-W908-6	0	0.00	Increase 33	Increase 0.09			33	0.09	843	20.20
3.2.1	Bulk Oils	LA-W909-0	28	3.75	Increase 0[i] Decrease 23	Increase 0.47 Decrease 2.22			5	2.00		
		LA-W909-4	8	1.48					8	1.48		
		LA-W909-5	28	2.28					28	2.28		
		LA-W909-6	0	0.00	Increase 4	Increase 0.05			4	0.05	45	5.81
3.2.1	PCB Wastes with RCRA Components	LA-W910-0	4	0.74	Increase 6	Increase 0.62[b]			10	1.36		
		LA-W910-6	0	0.00	Increase 30	Increase 1.39			30	1.39	40	2.75

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.2.1	Liquid and Solid Oxidizers	LA-W923-0	6	0.117					6	0.117		
		LA-W923-4	67	0.145					67	0.145		
		LA-W923-5	13	0.317					13	0.317		
		LA-W923-6	0	0.00	Increase 7	Increase 0.795			7	0.795	93	1.37
3.3	Lead Waste - TBD	LA-W924-0	129	40.16					129	40.16	129	40.16
3.3	Mercury Wastes - TBD	LA-W925-0	63	18.30					63	18.30		
		LA-W925-4	37	0.42					37	0.42		
		LA-W925-5	14	1.52					14	1.52		
		LA-W925-6	0	0.00	Increase 23	Increase 0.67			23	0.67	137	20.91
3.3	Compressed Gases - TBD	LA-W926-0	10	1.25					10	1.25	10	1.25
3.3	Biochemical Laboratory Wastes	LA-W927-0	9	1.34					9	1.34	9	1.34
3.3	Dewatered Treatment Sludge	LA-W928-0	61	12.71					61	12.71	61	12.71
3.3	Explosives	LA-W932-0	0	0.00					0	0.00		
		LA-W932-4	1	0.000001					1	0.000001	1	0.000001

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.3	Lab Packs	LA-W933-0	0	0.00					0	0.00		
		LA-W933-4	114	0.17					114	0.17		
		LA-W933-5	28	0.13					28	0.13		
		LA-W933-6	0	0.00	Increase 6	Increase 0.003	Increase 1	Increase 0.00002[j]	7	0.003	149	0.30
3.4.1	Lead for Surface Decontamin-ation	LA-W930-0	36	33.43	Decrease 1 Decrease 4 Decrease 6 Decrease 2	Decrease 0.11[k] Decrease 0.35[k] Decrease 1.04 Decrease 5.66			23	26.27		
		LA-W930-5	115	23.75	Decrease 1 Decrease 3	Decrease 0.21[k] Decrease 0.62[k]			111	22.92		
		LA-W930-6	0	0.00	Increase 14	Increase 12.06			14	12.06	148	61.25

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Treatability Group	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)	Items	Volume (m^3)
3.4.2	Nonradioactive or Suspect Waste Items to be Surveyed	LA-W929-0	2	0.0076	Decrease 2	Decrease 0.0076			0	0.00		
		LA-W929-5	1	0.00002			Decrease 1	Decrease 0.00002[j]	0	0.00	0	0.00
None[l]	Lead Requiring Sorting	LA-W931-0	23	4.76	Decrease 23 Increase 0[m]	Decrease 4.78 Increase 0.02			0	0.00		
		LA-W931-5	8	0.44					8	0.44		
		LA-W931-6	0	0.00	Increase 4	Increase 0.64			4	0.64	12	1.08
None[n]	IPA	None	0	0.00	Increase 1 Decrease 1	Increase 0.0005[n] Decrease 0.0005[n]			0	0.00	0	0.00

TABLE B-1. SUMMARY TABLE
STP/CPV MLLW INVENTORY CHANGES FOR REVISION 6.0

CPV Section	Category	MWIR ID (by subgroup)	Net Covered Waste Inventory by Subgroup (reported in Rev. 4/5)		Revision 6 (3/98 FY97 Annual Update Changes)		Revision 6 (Other Changes)		Subtotal (by subgroup)		Net Covered Waste Inventory (including Rev. 6 changes)	
			Items	Volume (m^3)	Items	Volume (m^3)			Items	Volume (m^3)	Items	Volume (m^3)
3.5	Missing/ nonexistent/ TBV	NONE (Revision 5)	48	8.81					48	8.81	48	8.81

NOTES:

[a] This correction in LA-W904 volume arises from an error in the Appendix B in Revision 4/5 as discussed in Revision 6.0.
[b] This transfer of LA-W904 waste to LA-W910 was approved by NMED on September 18, 1997 as discussed in Revision 6.0
[c] This transfer of LA-W904 waste to LA-W911 was approved by NMED on September 18, 1997 as discussed in Revision 6.0
[d] This correction in LA-W906 volume arises from an error in the Appendix B in Revision 4/5 as discussed in Revision 6.0.
[e] The volume increase arises from the return of unused treatability study sample. It has been returned to the original inventory of LA-W919 (subgroup -0) consistent with the inventory subgroup from which the sample was removed.
[f] These 5 items in subgroups LA-W921-0 and -5 (0.89 m^3 total) were shipped on December 9, 1996 as discussed in DOE's letter dated December 24, 1996.
[g] This increase in LA-W908 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[h] This decrease in LA-W908 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[I] This correction in LA-W909 volume arises from an error in Appendix B in Revision 4/5 as discussed in Revision 6.0.
[j] This transfer of LA-W929 waste to LA-W933 is discussed in Revision 6.0.
[k] The shipment of 0.32 m^3, as reported in the FY97 STP *Annual Update*, consisted of 1 item (0.11 m^3) from subgroup LA-W930-0 and 1 item (0.21 m^3) from subgroup -5. The shipment of 0.97 m^3, as reported in the FY97 STP *Annual Update*, consisted of 4 items (0.35 m^3) from subgroup -0 and 3 items (0.62 m^3) from subgroup -5.
[l] This treatability group (LA-W931, *Lead Requiring Sorting*) is not listed in the CPV; however it is discussed in section 3.4.3 of the *Background Volume*.
[m] This increase in LA-W931 volume arises from an error in the original STP inventory data as discussed in Revision 6.0.
[n] This item of isopropyl alcohol waste was not included in the original STP inventory and it was shipped for treatment as discussed in DOE's letter dated January 9, 1997.