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# Los Alamos National Laboratory Federal Facility Compliance Order Annual Site Treatment Plan Update for Fiscal Year 2015



Prepared by the Waste Management Division

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## ACRONYMS

40 CFR	Title 40 of the Code of Federal Regulations
AMWTP	Advanced Mixed Waste Treatment Plant
CCA	Compliance Certification Application
CCP	Central Characterization Project
CMR	Chemistry and Metallurgy Research (Building)
CP	Compliance Plan
CVD	Confinement Vessel Disposition (project)
DOE	U.S. Department of Energy
EM	Environmental Management
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration
FFCA	Federal Facility Compliance Act
FFCO	Federal Facility Compliance Order
FY	fiscal year
HWA	Hazardous Waste Act
HWB	Hazardous Waste Bureau
INL	Idaho National Laboratory
LANL	Los Alamos National Laboratory
LANS	Los Alamos National Security, LLC
LDR	Land Disposal Restrictions (RCRA)
LLW	low-level waste
LWAA	Land Withdrawal Act Amendments
MLLW	mixed low-level waste
MTRU	mixed transuranic (Waste)
MWIR	Mixed Waste Inventory Report
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
PCB	polychlorinated <del>pb</del> iphenyl
PISA	Potential Inadequacy in the Safety Analysis
RCRA	Resource Conservation and Recovery Act

STP	Site Treatment Plan
SWB	standard waste box
TA	Technical Area
TBD	to be determined
TBV	to be verified
TRU	transuranic
UC	University of California
WCRRF	Waste Characterization, Reduction, and Repacking Facility
WCS	Waste Control Specialists, LLC
WIPP	Waste Isolation Pilot Plant



## INTRODUCTION

On October 6, 1992, Congress passed the Federal Facility Compliance Act (FFCA) to address compliance by the U.S. Department of Energy (DOE) with the Land Disposal Restrictions (LDR) for the storage of mixed waste set forth in Section 3004(j) of the Resource Conservation and Recovery Act (RCRA). The FFCA requires 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 the RCRA. The FFCA 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, the FFCA requires NMED to provide public notice, consider public comments, and consult with the U.S. Environmental Protection Agency (EPA) and any other state in which a facility affected by the STP is located.

On October 4, 1995, NMED issued a Federal Facility Compliance Order (FFCO) to DOE and the management and operating contractor, the University of California (UC) Regents. On June 1, 2006, Los Alamos National Security, LLC (LANS) replaced UC as operating contractor of Los Alamos National Laboratory (LANL). LANS then assumed responsibility for FFCO compliance.

The FFCO required DOE/LANS to implement an STP for the treatment of mixed waste at LANL. The STP is intended to fulfill the FFCA requirements and establish an enforceable framework to allow DOE and LANS (Respondents) to achieve full compliance with LDR requirements under the New Mexico Hazardous Waste Act (HWA) and RCRA. The compliance dates set forth in the STP are enforceable time periods in which Respondents are required to treat or otherwise meet the requirements set forth for LDR under the HWA and RCRA.

On March 31, 1995, DOE submitted its proposed STP, which addressed treatment capacities and technologies to treat all of LANL's mixed waste, regardless of the time it was generated, to NMED. On April 17, 1995, the public was provided an opportunity to comment to NMED on DOE's draft STP. After considering public comment and otherwise complying with the FFCA, NMED approved the draft STP with modifications.

Section VII of the FFCO requires DOE/LANS to submit an Annual STP Update to NMED each year on or before March 31. The FFCO requires that the Annual Update bring the information in both the Background and the Compliance Plan (CP) current to the end of the previous federal fiscal year (FY). Part I of this Annual Update constitutes the update to the Background. Part II contains the changes that have occurred since the last Annual Update and also identifies proposed revisions and amendments to the CP. Part III incorporates the changes in Part II into the proposed CP revision (Revision 26.0).

## PART I BACKGROUND UPDATE

### 1.0 INTRODUCTION

The Background (Part I) provides the following information.

- The estimated volume of covered waste in storage at the end of the previous FY and anticipated to be placed in storage for the next five FYs.
- A progress report from the end of the previous federal FY describing treatment progress and treatment technology development for each treatment facility and activity scheduled in the STP.
- A description, if applicable, of current or anticipated alternative treatment technology that is being evaluated for use instead of treatment technologies or capacities identified in the STP.
- A description of DOE's funding for STP-related activities and any funding issues that may affect the schedule.
- The status of the "No-Migration Variance Petition" or any treatability variances.
- A progress report on characterization and/or treatment capabilities or plans for mixed transuranic (MTRU) waste related to the waste treatment standards, if any, for the DOE Waste Isolation Pilot Plant (WIPP) facility near Carlsbad, New Mexico.

The STP-covered waste inventory is verified during quality control activities. Inconsistencies in treatability group or volume between the original inventory and the current inventory may exist. These inconsistencies are reconciled annually with the STP update.

### 2.0 AMOUNT OF EACH COVERED WASTE STORED AT LANL

#### 2.1 Mixed Low-Level Waste (MLLW) Inventory

During FY15, STP-covered MLLW inventories increased from approximately 14 m<sup>3</sup> to 36 m<sup>3</sup>. The increase was mainly due to the restricted movements of waste onsite at Area G since early calendar year 2015 while inadequacies with Area G Safety Basis assumptions on combustible waste fraction are being analyzed and corrected. This restriction will delay the final confirmation, characterization, certification, and shipment for offsite treatment and disposal of these containers until the Safety Basis issues are resolved and the restrictions on moving this waste are lifted. Table 2.1-1 summarizes changes to the estimated FY15 STP-covered MLLW inventory.

Appendix A provides the detailed changes to the FY15 covered MLLW inventory by treatability group, including the inventory at Technical Area (TA) 55 and the Chemistry and Metallurgy Research Building (CMR) Building. Appendix B (Table B-1) lists the FY15 MLLW shipments. Table B-2 identifies other deleted waste. If any, administrative adjustments to the MLLW inventory are shown in Appendix C (Table C-1). Detailed information about the administrative adjustments in Table C-1 are shown in Table C-2. The MLLW inventory reported in the FY14 Annual Update is included as Appendix D.

Table 2.1-1 FY15 MLLW Inventory Summary

Contribution	Volume (m <sup>3</sup> ) <sup>1</sup>
Estimated MLLW Inventory Reported in FY14 Annual Update	13.679
Proposed Revision 26.0	
New Covered Waste	0.644
Administrative Adjustments <sup>2</sup>	21.366
Offsite Treatment	NA <sup>3</sup>
Offsite Recycle	NA <sup>3</sup>
Onsite Decontamination	NA <sup>3</sup>
Treatability Study Use	NA <sup>3</sup>
<b>Estimated MLLW Inventory Reported in FY15 Annual Update</b>	<b>35.689</b>

<sup>1</sup> MLLW volumes are calculated using the conversion: 55-gallon container = 0.208 m<sup>3</sup>; 85-gallon container = 0.322

<sup>2</sup> Includes transfers of MTRU and other wastes into MLLW categories

<sup>3</sup> NA = No Activity

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## 2.2 Mixed Transuranic (MTRU) Inventory Summary

During FY15, STP-covered MTRU inventories increased from approximately 916 m<sup>3</sup> to 938 m<sup>3</sup>.

Table 2.2-1 summarizes changes to the estimated FY15 MTRU covered waste inventory. The total volume of MTRU waste in Table 2.2-1 includes the CMR and TA-55 MTRU volumes, which are maintained in a separate inventory from the MTRU inventory at TA-54. Appendix E contains additional detail for the MTRU inventory; Table E-1 covers the TA-54 inventory and Table E-2 covers the inventory at CMR and TA-55. The volume of STP-covered MTRU waste that is part of the “non-cemented above-ground Environmental Management (EM) Legacy TRU” (MTRU waste only) has been summarized in Appendix E-1 and Section 4.0 of the CP. Appendix F (Table F-1) provides a summary of FY15 MTRU shipments to WIPP. In Appendix G, Tables G-1 and G-2 describe the administrative adjustments that were made to resolve differences in the TA-54 and the CMR/TA-55 MTRU inventory data, respectively. DOE/LANS anticipates STP-covered MTRU inventory increases because of the WIPP shutdown as of February 14, 2014.

Administrative adjustments typically represent the following types of activities:

- DOE/LANS may correct database entries so that waste items not previously listed as STP waste are now identified as STP waste.
- DOE/LANS may correct waste data, such as volume or EPA codes, through quality control activities. Under DOE standards, waste that was formerly classified as MTRU because it had radioactivity greater than 10 nCi/g has been reclassified to MLLW (LA-W935) if its activity is less than 100 nCi/g.
- New analytical data may also require that waste streams previously managed as transuranic (TRU) waste should, as a prudent measure, be reclassified and managed as MTRU waste.
- During repacking or other quality control activities, TRU waste may be recharacterized as MTRU waste when previously unidentified hazardous contents, such as lead, are determined to be present.

- During repacking, treatability groups are frequently reassigned to be consistent with current management and shipping criteria.
- Containers of waste are occasionally determined not to belong to mixed waste streams and are reclassified as TRU waste; removal of WIPP-prohibited items, if they are the only hazardous constituent, will result in the remaining waste being classified as nonmixed.
- Addition or removal of 85-gallon overpacks changes the volume of waste in the inventory; rounding container volumes to three decimal places also changes the inventory volume.

Appendix G includes changes to the MTRU waste inventory that resulted from repacking activities. MTRU waste volumes in the STP inventory reflect the volume of the container rather than the volume of the contents. When containers are repacked, the STP inventory volume of any given treatability group may either increase or decrease. When a container is repacked, the contents are sometimes split into two or more new containers to meet shipping and waste acceptance criteria or to meet characterization criteria (e.g., nondestructive analysis calibration limits). In addition, the new containers may be assigned to different treatability groups depending on the contents of each drum. Therefore, the volume of a single drum may 'multiply' into more volume than the original container. For example, repacking one container of *Cemented Sludge* (0.208 m<sup>3</sup>) may result in one drum of *Combined Combustible-Noncombustible Waste* (0.208 m<sup>3</sup>) and one drum of *Noncombustible Waste* (0.208 m<sup>3</sup>). In addition, changes in the waste volume in the STP inventory occur when an 85-gallon 'overpack' is removed from, or added to, a 55-gallon drum during repackaging. Removal of overpacks decreases the volume of waste in the STP inventory. Adding an overpack to a 55-gallon drum increases the volume of waste shown in the STP inventory.

Table 2.2-1 Covered MTRU Inventory Summary

Description		Volume (m <sup>3</sup> )
Covered MTRU Inventory Reported in FY14 (42.357 m <sup>3</sup> at CMR/TA-55 and 873.759 m <sup>3</sup> at TA-54)		916.116
New Covered MTRU Waste at TA-54		6.038
New Covered MTRU Waste at CMR/TA-55		11.058
Covered MTRU Waste Shipped to WIPP in FY15 below grade		0.0000
Covered MTRU Waste Shipped to WIPP in FY14 remaining above grade (on hold per NMED)	9.048 <sup>1</sup>	
Covered MTRU Waste Shipped to Waste Control Specialists, LLC (WCS), Texas in FY14 (on hold per NMED)	155.718 <sup>1</sup>	
Covered MTRU Waste Shipped to the Advanced Mixed Waste Treatment Plant (AMWTP), Idaho in FY14 (on hold per NMED)	22.892 <sup>1</sup>	
Net Administrative Adjustments for TA-54 in FY14		11.984
Net Administrative Adjustments for CMR/TA-55 in FY14		-7.571
<b>Covered MTRU Inventory at End of FY15</b>		<b>937.625</b>

<sup>1</sup> Volume not to be subtracted from the STP inventory. Removal of this waste from STP inventory is on hold until NMED approval is received.

### **3.0 TREATMENT PROGRESS**

#### **3.1 Offsite Treatment**

DOE/LANS did not ship any STP-covered MLLW offsite for treatment and/or disposal in FY15.

Appendix B summarizes LANL's offsite shipments for treatment and/or disposal of covered MLLW in FY15.

#### **3.2 Offsite Recycling**

DOE/LANS did not recycle any STP-covered MLLW offsite in FY15.

#### **3.3 Onsite Treatment and Recycling**

DOE/LANS did not treat or recycle any STP-covered MLLW onsite in FY15.

#### **3.4 Onsite Lead Decontamination**

No LANL STP-covered MLLW was decontaminated onsite during FY15.

#### **3.5 Treatability Studies**

DOE/LANS conducted no treatability studies in FY15.

#### **3.6 Administrative Adjustments and Corrections**

Administrative adjustments and corrections are due to discrepancies found during quality control activities related to preparing waste for treatment, inventory, and disposal or when preparing the STP Annual Update. A data quality review is conducted annually to compare shipment notifications and shipping manifests with database updates.

##### **3.6.1 Adjustments to MLLW Inventory**

Appendix C (Table C-1) details the administrative adjustments to the MLLW inventory. The principal adjustment reflects the transfer of MTRU waste to MLLW (LA-W935, 10–100 nCi/g). A substantial volume of LANL's STP-covered MTRU waste has been determined to no longer meet the criteria for TRU waste and has been reclassified as MLLW. If previously unidentified hazardous waste constituents, such as lead, are revealed during repacking or other quality control activities, low-level waste may be recharacterized as MLLW. (Appendices C and G).

##### **3.6.2 Adjustments to MTRU Inventory**

During the preparation of the FY15 STP Annual Update, DOE/LANS identified a number of adjustments to the MTRU inventory volume (Appendix G, Tables G-1 and G-2), including additions of newly-identified STP-covered waste, recharacterization of waste, and reclassification of MTRU waste to MLLW. Other adjustments were needed to account for volume changes due to repacking of waste and transfers of waste from one treatability group to another or to correct database entries.

## 4.0 TREATMENT TECHNOLOGY DEVELOPMENT

During FY15, the availability of commercial and federal facility offsite treatment and disposal capacity for MLLW remained stable. As a result of DOE's increasing reliance on commercial treatment/disposal for mixed wastes, nearly all funding for onsite technology development has been prioritized to support offsite treatment and disposal of mixed wastes. DOE treatment technology development initiatives are generally limited to specific technologies or technology adaptations in response to specific needs that cannot be addressed through commercial facilities.

### 4.1 Treatment Technologies Being Evaluated

DOE/LANS continues to monitor the development of other potential treatment technologies that may become available in the future. Some of these technologies are being developed at LANL and at other DOE sites. DOE/LANS is currently developing treatment technologies to address the type of TRU waste associated with the February 14, 2014, release of radioactivity at WIPP. The treatment process is specifically intended to address remaining remediated nitrate salt, unremediated nitrate salt, and cemented nitrate salt wastes remaining at LANL, as required by Settlement Agreement and Stipulated Final Order Hazardous Waste Bureau (HWB) 14-20.

DOE/LANS re-evaluated all nitrate salt-bearing TRU waste and determined the three types of waste located at LANL that will require treatment prior to acceptance at WIPP. Methods for treatment of these wastes are currently under development by DOE/LANS. Methods will utilize surrogates for the waste and both onsite and offsite testing facilities to evaluate treatment effectiveness. After confirmation of the treatment process for these wastes, permitted onsite treatment will be requested from the NMED-HWB.

#### 4.1.1 Offsite Commercial Treatment Facilities

DOE/LANS continues to monitor the availability and capabilities of offsite commercial facilities for treatment technologies and permitting that are appropriate to LANL waste. These facilities are listed in Appendix H (Table H-1).

#### 4.1.2 Offsite DOE Treatment Facilities

DOE/LANS continues to monitor the availability and capabilities of offsite DOE facilities for treatment technologies and permitting that are appropriate to LANL waste. In the past, DOE/LANS shipped nine corrugated metal boxes to the Idaho National Laboratory Advanced Mixed Waste Treatment Plant (AMWTP) for treatment. These nine boxes were successfully treated at the AMWTP and are stored at the Waste Control Specialists, LLC (WCS) facility until WIPP is re-opened to ready to accept waste.

## 5.0 DOE FUNDING FOR STP-RELATED ACTIVITIES

Funding to implement the LANL STP for mixed waste during FY15 was sufficient to meet all compliance dates as required by the CP of the STP. However, DOE/LANS shipments were on hold while DOE/LANS addressed safety basis concerns. FY16 funding is available to support all compliance dates established in the STP. Should funding reductions occur that would affect STP compliance dates, DOE and LANS will notify NMED to address compliance schedules and activities.

## 6.0 TREATMENT VARIANCES

RCRA allows certain case-by-case variances from LDR standards. Variances that may be sought under 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.

### **6.1 WIPP No-Migration Variance Petition/Land Withdrawal Act Amendments**

WIPP, located near Carlsbad, New Mexico, is a DOE repository for TRU waste 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 WIPP Land Withdrawal Act Amendments of 1996 (LWAA) (Public Law 104-201, Section 3188) exempted waste designated by the Secretary of Energy for disposal at WIPP from RCRA's LDRs.

Following passage of the LWAA, the EPA terminated its review of the No-Migration Variance Petition submitted by DOE to EPA in May 1995. EPA formalized its withdrawal by letter to George Dials, DOE/Carlsbad Area Office Manager, dated December 29, 1997.

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 Title 40 of the Code of Federal Regulations (40 CFR) Part 191 and 40 CFR Part 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. On May 18, 1998, EPA published in the Federal Register (63 FR 27354) its final rule certifying that WIPP will comply with the requirements of Subparts B and C of 40 CFR Part 191 and amending the WIPP compliance criteria in 40 CFR Part 194. The final rule became effective June 17, 1998. On March 25, 1999, WIPP received its first shipment of non-mixed (radioactive only) TRU waste from LANL. Other facilities have also shipped non-mixed TRU waste to WIPP. NMED issued a hazardous waste permit for WIPP on October 27, 1999, authorizing DOE to manage, store, and dispose of contact-handled MTRU waste at the facility.

### **6.2 Other Treatment Variance(s)**

No treatment variances were requested or granted in FY15.

## **7.0 WIPP FACILITY CAPABILITIES**

As discussed above, DOE is disposing of its defense TRU waste, both mixed and nonhazardous, in its deep geologic repository at the WIPP near Carlsbad, New Mexico. This facility is 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 offsite. On February 2014, NMED received notice of a release at the WIPP nuclear waste repository. A LANL container sent to WIPP experienced an energetic chemical reaction that ultimately led to the release of radioactive material. In light of recent events, and the potential need to re-remediate all nitrate salt-bearing waste, NMED determined that the removal of MTRU from the STP will be deferred until more information becomes available and it is determined that waste currently stored at the WCS facility and WIPP remaining above

grade will not be returned to LANL. All shipments of MTRU covered waste inventory to WIPP were suspended in May 2014 due to the WIPP shutdown.

### **7.1 Characterization Capabilities at WIPP**

Wastes proposed for shipment to WIPP are characterized and certified at LANL by the Central Characterization Project (CCP), a contractor to DOE's Carlsbad Field Office.

### **7.2 MTRU Treatment Capabilities and Plans**

WIPP is not required to treat MTRU waste to meet the LDR standards. As described above, the LWAA exempted wastes designated by the Secretary of Energy for disposal at the WIPP from this requirement.



## PART II COMPLIANCE PLAN UPDATE

### 1.0 INTRODUCTION

This update to the CP contains:

- Changes to the CP occurring since the previous Annual Update, including:
  - correspondence, including notices of shipments; and
  - new covered and deleted waste;
- Proposed revisions and amendments, including:
  - compliance date changes;
  - description of waste deleted in accordance with the requirements in FFCO Section IX, *Deletion of Waste*;
  - documentation of new covered waste in accordance with the requirements in Section VIII, *Addition of New Covered Waste*; and
  - proposed changes to the overall schedule in the CP.

### 2.0 CHANGES AND REVISIONS TO THE CP OCCURRING SINCE THE PREVIOUS ANNUAL UPDATE

This section describes revisions, amendments, or other changes to the LANL CP.

#### 2.1 Activities Completed During FY15

During FY15, no CP Activity milestones were scheduled.

*Table 2.1-1 FYXX FFCO and STP Milestones Compilation [Table omitted]*

#### 2.2 Expedited Shipment Letters

There were no expedited shipment letters in FY15.

#### 2.3 Correspondence

Between October 1, 2014 and September 30, 2015, DOE/LANS communicated with NMED on issues related to:

- FY14 and FY15 waste shipment notifications;
- 15-day notification, proposed deletion of waste;
- Revision 25.0 of the Annual STP Update; and
- Response to August 26, 2015, Notice of Disapproval.

This correspondence is listed in Appendix I (Table I-2). Correspondence previously listed in Appendix I, Table I-2 of Revision 25.0 of the STP is so noted in the appendix.

### 3.0 DESCRIPTION OF DELETED WASTE

A proposal for deletion of STP waste items is included with this update as Proposed Revision 26.0 in accordance with FFCO Section IX, *Deletion of Waste*. These deletions are proposed because the wastes were shipped offsite for treatment, disposal, or recycling or were otherwise determined not to be mixed wastes. These covered wastes are included in Appendix B, Appendix F, and Appendix G.

### 4.0 DOCUMENTATION OF NEW COVERED WASTE

A proposal for addition of STP waste items is included with this update in accordance with FFCO Section VIII, *Addition of Waste*. These additions consist of wastes placed in storage during FY14 and were proposed to become covered wastes in FY15. These covered wastes are included in Appendix E. Addition of new covered and newly characterized as MTRU waste to be added to the STP is identified in Section 6.1.

### 5.0 PROPOSED CHANGES TO THE COMPLIANCE PLAN SCHEDULE

DOE/LANS is proposing to revise the milestone for Activity 4.0-2(C) to “complete transfer of Metallic Waste to CMR for material retrieval.” This milestone addresses the MTRU metallic waste inventory at TA-55. DOE/LANS expects to be able to complete transfer of the metallic wastes by November 30, 2018.

#### I. Compliance Dates and Waste Description

MTRU covered metallic wastes are associated with the Confinement Vessel Disposition (CVD) project. The project involves recovery of materials and wastes from confinement vessels stored at TA-55. The vessels contain important programmatic materials that can be recovered and used in current DOE National Security programs.

Current proposed compliance date: September 30, 2017.

Proposed Revision 26 compliance date: November 30, 2018.

#### II. Recovery Process

The CVD project is an onsite radiological decontamination project, as described in Part III (CP), Section 2.7 of this STP Update. As described therein, methods such as sand-blasting and hand-scrubbing are used to remove radiologically-contaminated materials and wastes from the interior surfaces of the confinement vessels. The project involves performing the following process steps on each vessel:

1) empty the vessel of its contents, 2) sort and segregate the programmatically-valuable material from the other material in the vessel, 3) decontaminate the vessel to low-level waste (LLW) levels if technically possible, and 4) disposition the removed waste and the emptied vessel in accordance with current radioactive and hazardous waste regulatory requirements. Programmatically-valuable material was packaged separately and supplied to a LANL research team performing national security work. Material was removed from two vessels, and a third was moved to the recovery facility for processing.

### III. Availability of Recovery Facility

The project is being executed in Wing 9 of the CMR Building at LANL. DOE/LANS notifies NMED in writing at least 15 calendar days before each vessel is transferred to the recovery facility at the CMR building for material retrieval.

### IV. Justification for Milestone

This is still a relatively new process that had never been attempted before the first vessel was processed. DOE/LANS is requesting the revised date because several challenges for meeting the project's original objective caused unexpected delays affecting the overall project schedule. The delays are as follows:

- 1) Difficulties with meeting the LLW vessel-decontamination criterion of less than 100 nancuries/gram. Some of the vessels encountered so far in this project have so much unexpected embedded material that they will require additional methods for decontamination that are not currently available at the CVD recovery facility. Additional decontamination methods are being investigated at TA-54; however, processes that would constitute physical or chemical treatment of waste would require Respondents to seek a permit before proceeding. If the LLW criterion cannot be met using the current decontamination process, a vessel may have to be size-reduced into four sections and each section will be discarded as TRU waste.
- 2) Unforeseen process deviations occurred with the first vessels being processed. Work was paused and placed in a safe configuration while the operating procedure was modified to address the deviation. In a nuclear facility such as CMR building, modifications must follow the Integrated Work Management Process, which includes management approvals and an Unreviewed Safety Questions Determination. Workers were trained to the changed procedure and the procedure was implemented in the field. For the cleanout of vessel 1, there were seven procedure changes resulting in a total of about a 14-week delay. As evidence of team learning and process improvement, vessel 2 required only three procedure changes resulting in a total of about a 4-week delay.

A change required in the CMR authorization basis due to a Potential Inadequacy in the Safety Analysis (PISA) was declared for the CVD project on February 12, 2015. The PISA was related to an undefined state for the second vessel being cleaned-out where radionuclide quantities exceeded the dose equivalent threshold value for the authorization basis at that facility. The new safety analysis took 11 months to complete, which caused the longest work delay in 2015. While the CMR authorization basis was changed, some processing activities authorized by the current documented safety analysis continued on other vessels at the facility; but any significant progress on other vessels was precluded due to the configuration of the second vessel during the pause.

No other changes to the schedule in the CP of the STP are proposed.

## 6.0 DETAILED DESCRIPTION OF THE PROPOSED REVISION

The purpose of this revision request is to reflect changes in the STP inventories in the LANL CP of the STP in accordance with FFCO Section X.C.2.a. The changes proposed by this revision to the CP 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 CP text changes are indicated in the redlined version provided to NMED.

DOE/LANS is proposing to revise the CP text to reflect the following change in STP-covered inventories:

- Increases and decreases in covered mixed waste inventories due to the addition of new covered waste and offsite shipments during FY15 and other changes in the STP inventory.

The CP 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*.

### 6.1 Addition of New Covered<sup>1</sup> Waste

DOE/LANS is requesting that the following waste be added to the STP as covered waste.

#### 6.1.1 MLLW Additions

The volume of MLLW requested for addition is 0.644 m<sup>3</sup> of new-covered 10–100 nCi/g Waste (LA-W935).

Table 6.1.1-1 Proposed Addition of New-Covered MLLW Waste

CP Section	MWIR <sup>1</sup> Waste ID	Treatability Group	Volume (m <sup>3</sup> )
3.3.4	LA-W935	10–100 nCi/g Waste	0.644 <sup>2</sup>
<b>Total</b>			<b>0.644</b>

<sup>1</sup>MWIR is Mixed Waste Inventory Report.

<sup>2</sup>Real-time radiography recharacterization of LLW.

#### 6.1.2 MTRU Waste Additions

The volume of new-covered MTRU waste requested for addition is 17.096 m<sup>3</sup> (Table 6.1.2-1). DOE/LANS also requests the addition of 1.288 m<sup>3</sup> of *Combustible-Noncombustible Waste*, previously managed in the TRU inventory (Appendix G, Table G-1). Table 6.1.2-2 identifies waste that is proposed for addition following activities that identified waste in the TRU inventory as MTRU either through review of waste characteristics or as a result of identifying potentially hazardous constituents during repacking TRU waste.

Table 6.1.2-1 Proposed Addition of New Covered<sup>1</sup> MTRU Waste

CP Section	Treatability Group	Volume (m <sup>3</sup> )
4.0	Combustible-Noncombustible Waste	6.038
<b>Total TA-54 New Covered Waste</b>		<b>6.038<sup>2</sup></b>
4.0	Combustible-Noncombustible Waste at CMR	4.188
4.0	Combustible-Noncombustible Waste at TA-55	2.912
4.0	Combustible Waste at TA-55	3.126
4.0	Noncombustible Waste at TA-55	0.832
<b>Total CMR/TA-55 New Covered Waste</b>		<b>11.058<sup>3</sup></b>
<b>Total New Covered Waste</b>		<b>17.096</b>

<sup>1</sup>New-covered waste in Table 6.1.2-1 refers to waste generated in the previous FY.

<sup>1</sup> Waste generated during the previous FY that was not shipped offsite within one year is termed new-covered STP waste.

<sup>2</sup>Waste generated during the previous FY that was not shipped offsite within one year. All shipments of MTRU covered waste inventory to WIPP were suspended in May 2014 due to the WIPP shutdown.

<sup>3</sup>Due to updating its Safety Basis documents, TA-54 has temporarily stopped or significantly reduced the receipt of LANL-generated MTRU waste at TA-54.

Table 6.1.2-2 Proposed Addition of Waste Newly Characterized as MTRU

CP Section	Treatability Group	Volume (m <sup>3</sup> )
4.0	<i>Noncombustible Waste</i> (identification of potentially hazardous constituents based on investigation of characterization of TRU nitrate salt waste)	1.288
<i>Total Newly-Characterized MTRU</i>		<b>1.288</b>

## 6.2 Deletion of Covered Waste

MLLW and MTRU wastes were shipped offsite for treatment and disposal or recycling or are otherwise proposed as deleted waste.

### 6.2.1 Deletion of MLLW

No waste was shipped offsite for treatment and disposal or recycling. No waste is proposed for deletion due to treatment and disposal or recycling in FY15.

### 6.2.2 Deletion of MTRU Waste

No waste was shipped offsite for disposal at WIPP. No waste is proposed for deletion in 2015 due to disposal at WIPP.

### 6.2.3 Other Deletions of FY15 Waste

No waste is proposed for deletion due to recycling or onsite treatment in FY15. No waste was shipped offsite for treatability studies.

## 6.3 Adjustments to the Original (October 4, 1995) STP-Covered MLLW Inventory

DOE/LANS is requesting adjustments to the original (October 4, 1995) STP-covered MLLW inventory as listed in Appendix C (Table C-1). Most administrative adjustments are due to reclassification of MTRU waste to MLLW treatability groups and to quality control activities related to preparing waste for treatment and disposal. These adjustments may result in additions of newly-identified covered waste or transfers of waste to other treatability groups.

## 6.4 Adjustments to MTRU Waste Inventory

DOE/LANS is requesting adjustments (Appendix G, Tables G-1 and G-2) to the original (October 4, 1995) STP-covered MTRU waste inventory. Most administrative adjustments are due to reclassification of MTRU waste to MLLW treatability groups or to other MTRU treatability groups and to reclassification of TRU to MTRU as a result of quality control activities related to preparing waste for treatment and disposal. These adjustments may result in additions of newly-identified covered waste or transfers of waste to other treatability groups.

## **6.5 Establishment of New Milestone Activity Dates**

DOE/LANS is not requesting any new compliance milestones.

## **6.6 Additional Revisions**

No other revisions are requested.

## **7.0 RATIONALE FOR THE PROPOSED REVISION**

This information is provided in accordance with FFCO Section X.C.2.a.

### **7.1 Establishment of New Proposed Milestone**

No new milestones are proposed.

### **7.2 Addition of New Covered Waste**

Waste that was newly generated in FY14, which was not treated within 12 months of generation, became new covered waste during FY15 (see Appendix E). In addition, TRU wastes, re-evaluated during repacking and quality control activities as having previously unidentified RCRA constituents, were also added to the STP inventory (Appendix G). Approval of these proposed additions to the STP inventory 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.

### **7.3 Deletion of Covered Waste**

There were no deletions of covered waste in FY15.

### **7.4 Adjustments to the Original (October 4, 1995) STP-Covered Waste Inventory**

Administrative adjustments result from quality control activities related to preparing waste for treatment and disposal. These adjustments result in additions of newly-identified covered waste and transfers of waste to other treatability groups. The adjustments to the original (October 4, 1995) STP-covered waste inventory are proposed to more accurately reflect the LANL STP inventory as of the end of FY15.

## **8.0 ANTICIPATED LENGTH OF ANY DELAY IN PERFORMANCE**

In accordance with FFCO Section X.C.2.c, DOE/LANS cannot confidently predict the anticipated delay in performance for shipping covered STP MTRU waste for which the only currently allowed deletion pathway is disposal at WIPP. All shipments of MTRU covered waste inventory offsite were suspended in May 2014 due to the WIPP shutdown. At this time, DOE/LANS cannot confidently predict when the TA-54 processing lines will come back online for further processing of MTRU and/or MLLW covered waste.

## **9.0 PLAN AND SCHEDULE FOR IMPLEMENTING ALL REASONABLE MEASURES**

All other measures proposed could be implemented within the framework of the existing plan and schedule for the STP (FFCO Section X.C.2.d).

## **PART III COMPLIANCE PLAN – PROPOSED REVISION 26.0**

### **1.0 PURPOSE AND SCOPE OF THE COMPLIANCE PLAN**

#### **1.1 Introduction**

Part III of this document identifies changes that require NMED approval as a revision under Section X, *Revisions*, or an amendment under Section XI, *Other Amendments to the STP*.

The CP includes a schedule for offsite transportation for treatment, or completion of parallel options as defined in each Treatability Group Section, and the treatment of mixed wastes in full compliance with the HWA and the implementing regulations at 20 New Mexico Administrative Code (NMAC) 4.1, that incorporates by reference 40 CFR Parts 260 through 270. Part I, Background, contains progress reports as required in the FFCO. Respondents shall carry out the activities described in the STP, including the CP, in accordance with the schedules and requirements set forth in the STP and the FFCO.

#### **1.2 STP Revisions and Amendments**

The STP CP 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, FFCO, as amended and revised. The history of revisions is provided in Appendix J.

### **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 process backlogged and currently generated waste and include schedules required to establish an overall timeframe 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 were identified and developed. For the waste that will be treated onsite, the categories of activities for compliance dates identified in Table 2.1.1-1 shall apply.

*Table 2.1.1-1 Categories of Activities for Compliance for Mixed Waste with Existing Treatment Technologies*

- |   |
|---|
| <ul style="list-style-type: none"><li>A. Submit permit applications to NMED.</li><li>B. Initiate construction as specified in the NMED permit.</li><li>C. Complete system testing and commence operation.</li><li>D. Begin treating mixed waste.</li><li>E. Complete treatment of existing wastes to applicable regulatory standards.</li></ul> |
|---|

### 2.1.2 Plans Where Technology Must Be Developed

For some mixed waste, no treatment technologies were identified and developed, or the treatment technology must be modified or adapted to apply to such waste. For the waste that will be treated onsite, the categories of activities for compliance dates are identified in Table 2.1.2-1 and shall apply.

Table 2.1.2-1 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 permit.
E.	Commence systems testing.
F.	Begin treating mixed waste.
G.	Complete treatment of existing wastes to applicable regulatory standards.

## 2.2 Primary Preferred Treatment

Offsite treatment at a commercial or noncommercial mixed waste treatment facility is the primary preferred treatment option applicable to all mixed waste streams in the STP inventory unless otherwise indicated in the descriptions of individual waste treatability groups. DOE may also pursue parallel treatment options, such as recycling/re-use or radiological decontamination. Requirements for waste shipped offsite for recycling are discussed under Part III, Section 2.6. All activities and compliance dates related to the construction, permitting, and operation of onsite treatment skids were removed from this document. This change was due to the increased availability of offsite treatment and disposal capacity for mixed waste. Respondents will continue evaluating new commercial and DOE offsite treatment facilities as potential options for managing mixed waste, as they become available.

## 2.3 Plans for Mixed Waste to be Shipped Offsite for Treatment

Should DOE decide to treat or recycle waste at a commercial offsite facility (Table 2.3-1), 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/recycling facility.

Table 2.3-1 Activities for Offsite Shipment for Treatment or Recycling at a Commercial Facility

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

DOE shall notify the NMED Project Manager in writing as soon as possible if mixed waste is planned to be sent to a noncommercial 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 offsite noncommercial 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 45 working days of receipt of waste at the treatment/recycling facility. Activities for mixed waste to be shipped offsite for treatment/recycling at a noncommercial facility are identified in Table 2.3-2.

Table 2.3-2 Activities for Shipment Offsite for Treatment or Recycling at a Noncommercial Facility

A.	Request necessary approval from NMED for shipment of waste by category before shipping.
B.	Meet all regulatory requirements for offsite shipment.
C.	Provide documentation to NMED of confirmation of shipment date within 14 working days prior to sending waste to an offsite 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 offsite facility for treatment within 45 working days of receipt of waste at the offsite 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.

### 2.3.1 Specific Site Requirements for Noncommercial Treatment Facilities

#### Shipment to Idaho National Laboratory

Prior to shipment, Idaho National Laboratory (INL) and Idaho Division of Environmental Quality shall be notified of any pending shipments of waste should DOE ship MLLW to INL. Proper procedures including additional approvals (if necessary) and documentation shall be completed prior to the shipment of wastes to INL. 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 30 working days after receipt of shipment of treatment residuals or newly-generated waste streams from INL.

Shipments of MLLW to planned facilities (not yet existing) will occur only after treatment and schedules are approved by the DOE Idaho Field Office 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

If Oak Ridge Reservation ~~may can~~ not dispose of mixed-waste residues or new waste streams generated from offsite 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 30 working days after receipt of shipment of treatment residuals or newly-generated waste streams from the Oak Ridge Reservation.

## 2.4 Requirements Pertaining to Radionuclide Separation

The FFCA sets additional requirements in cases where DOE intends to conduct radionuclide separation of mixed waste. Should DOE determine to do radionuclide separation of such mixed waste, DOE will schedule specific compliance dates based on category activities identified in Table 2.4-1. "Radionuclide separation" shall mean segregating the radioactive portion of the mixed waste from the hazardous portion of the mixed waste.

Table 2.4-1 Activities for Radionuclide Separation

- |  |
|--|
| <ul style="list-style-type: none"><li>A. Complete an estimate of the volume of waste generated by each case of radionuclide separation.</li><li>B. Complete an estimate of the volume of waste that would exist or be generated without radionuclide separation.</li><li>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.</li><li>D. Provide the assumptions underlying such estimates of waste volumes and cost estimates.</li><li>E. Provide characterization methodologies for determining waste type.</li><li>F. Submit a plan for treating or managing hazardous waste residues, accompanied by an NMED permit application.</li></ul> |
|--|

## 2.5 Plans Related to Other Mixed Waste Activities

Activities other than the types of activities specifically called for in the FFCA as requiring schedules are described in this STP. Some of these activities may be associated with schedules that may contain compliance dates related to treatment of DOE's mixed waste.

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 FFCO. 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 FFCO.

DOE will notify NMED when offsite treatability studies are conducted on STP waste. Treatability studies are used to explore alternative treatment options that may be practical for any or all of the STP mixed waste streams. When preparing waste for shipment for an offsite treatability study, DOE will evaluate the potential for incidental waste treatment or secondary waste generation, which are often associated with treatability studies.

## 2.6 Recycling/Re-Use

Respondent will pursue onsite or offsite recycling/re-use as a parallel preferred option.

Should DOE elect to use recycling facilities in lieu of (or in combination with) treatment, it will follow requirements as if the waste were shipped offsite for treatment. Any and all requirements by the recycling facility and all state, federal, or other regulatory requirements applicable at the 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 an offsite noncommercial recycling 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 offsite noncommercial recycling option prior to any shipment 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 recycling facility. Activities for mixed waste to be recycled are identified in Table 2.6-1.

Table 2.6-1 Requirements for Recycling

- |   |
|---|
| <ul style="list-style-type: none"><li>A. Meet all regulatory requirements for recycling/re-use.</li><li>B. Provide documentation to NMED that waste has been received within 45 working days of receipt of waste at the recycling facility.</li></ul> |
|---|

Should DOE elect to use recycling/re-use facilities in lieu of (or in combination with) treatment, it will follow the requirements as if the waste were shipped offsite for treatment. DOE will submit a notification letter to NMED within 45 days, in place of documentation, that waste was received at a recycling facility.

## 2.7 Onsite Radiological Decontamination

DOE will pursue onsite radiological surface or external decontamination as a preferred option. No volumetric or internal decontamination processes will be considered or performed. Surface radiological decontamination includes activities such as sand blasting, hand-scrubbing, or electrolytic decontamination. These decontamination activities could result in reducing or removing the radiological contaminant from the waste such that the waste could be recycled in accordance with CP Section 2.6 *Recycling/Re-Use* or be proposed for deletion in accordance with Section IX *Deletion of Waste* of the FFCO.

Activities for mixed waste to be radiologically decontaminated are identified in Table 2.7-1.

Table 2.7-1 Activities for Radiological Decontamination

- |  |
|--|
| <ul style="list-style-type: none"><li>A. Meet all DOE requirements for radiological decontamination.</li><li>B. Provide documentation to NMED that waste has been received within 45 working days of receipt of waste at the recycling facility; or</li><li>C. Propose waste for deletion in accordance with Section IX of the FFCO.</li></ul> |
|--|

## 3.0 MIXED LOW-LEVEL WASTE STREAMS

This section presents the preferred options to treat MLLW at LANL. All preferred options not described below must be approved by NMED in accordance with the revision process pursuant to the FFCO.

The original October 4, 1995, STP inventory in each MLLW treatability group was modified through the revision process in the FFCO. The tables in the STP Background (Part I) Appendices A–M of the FY09 STP Annual Update provide a comprehensive summary of changes to the CP covered waste inventories (additions, deletions, and shifts of waste between treatability groups) occurring as of the date of that revision. In Part III, 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 subsections of this section, 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 were assigned Activities and Compliance Dates unique to that subgroup, those subgroups are detailed in the text. Activities and Compliance Dates that were met in previous years are not shown in this document.

### 3.1 Mixed Waste Streams

The following subsections summarize MLLW treatability groups.

#### 3.1.1 IPA Wastes and Scintillation Fluids

Table 3.1.1-1 Treatability Groups for IPA Wastes and Scintillation Fluids

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
IPA Wastes	LA-W901	D001, D009, F002, F003, F005	0.00
Scintillation Fluids	LA-W902	D001, F003, F005	0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

**Treatment:** The waste will be treated at an offsite facility that combusts organic liquid waste.

#### 3.1.2 Lead Blankets, Soil with Heavy Metals, Environmental Restoration (ER) Soils

Table 3.1.2-1 Treatability Groups for Lead Blankets, Soil with Heavy Metals, ER Soils

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
Lead Blankets	LA-W903	D007, D008	0.00
Soil With Heavy Metals	LA-W904	D004, D005, D006, D007, D008, D009, D010, D011	0.00
ER Soils	LA-W905	D028, D029, F001, F005 D010, D011	0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

**Treatment:** The waste will be treated at an offsite facility that stabilizes or macroencapsulates wastes.

#### 3.1.3 Aqueous Organic Liquids

Table 3.1.3-1 Treatability Groups for Aqueous Organic Liquids

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
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	0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

Table 3.1.3-2 Additional Treatability Groups for Aqueous Organic Liquids

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
Aqueous Organic Liquids	LA-W906-6 LA-W906-9 LA-W906-10 LA-W906-15	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	0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

### 3.1.4 Organic-Contaminated Combustible Solids

Table 3.1.4-1 Treatability Groups for Organic-Contaminated Combustible Solids

Treatability Group	MWIR* Waste ID	RCRA codes	Net Volume (m <sup>3</sup> )
Organic-Contaminated Combustible Solids	LA-W911	D001, D004, D008, D009, F001, F002, F003, F005	0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

Table 3.1.4-2 Treatability Groups for Organic-Contaminated Noncombustible Solids

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
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	0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

### 3.1.5 Combustible Debris, Activated or Inseparable Lead, Noncombustible Debris

Table 3.1.5-1 Treatability Groups for Combustible Lead, Activated or Inseparable Lead, and Noncombustible Debris

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
Combustible Debris	LA-W912	D001, D002, D003, D005, D006, D007, D008, D009, D011, D035, F001, F002, F003, F005	0.00
Activated Or Inseparable Lead	LA-W921	D008	0.00
Noncombustible Debris	LA-W922 LA-W922-17 LA-W922-22 LA-W922-23 LA-W922-24 LA-W922-25	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011	0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

### 3.1.6 Aqueous Wastes with Heavy Metals, Corrosive Solutions, Aqueous Cyanides, Nitrates, Chromates, and Arsenates

Table 3.1.6-1 Treatability Groups for Aqueous Wastes with Heavy Metals, Corrosive Solutions, Aqueous Cyanides, Nitrates, Chromates, and Arsenates

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
Aqueous Wastes With Heavy Metals	LA-W913	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011	0.00
Corrosive Solutions	LA-W914	D001, D002	0.00
Aqueous Cyanides, Nitrates, Chromates, and Arsenates	LA-W915	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, F007, P029, P098	0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

### 3.1.7 Water-Reactive Metal

Table 3.1.7-1 Treatability Groups for Water-Reactive Metal

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
Water-Reactive Metal	LA-W916	D001, D003, D004, D005, D007, D008, D010, D011	0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

### 3.1.8 Compressed Gases Requiring Scrubbing

Table 3.1.8-1 Treatability Groups for Compressed Gases Requiring Scrubbing

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
Compressed Gases Requiring Scrubbing	LA-W917 LA-W917-21 LA-W917-24 LA-W917-25 LA-W917-26	D001, D002, D003, D008, D009, P056	1.248
<b>Totals</b>			<b>1.248</b>

\*MWIR is Mixed Waste Inventory Report

Table 3.1.8-2 Activities and Compliance Dates for Compressed Gases Requiring Scrubbing

Activity	Compliance Dates
A. Complete shipping of existing wastes to an offsite treatment facility or complete parallel option.	September 30, 2018
B. Provide documentation to NMED that waste was received at offsite facility or provide notification of parallel option.	Within 45 days of receipt of waste at treatment facility or within 45 days after completion of parallel option.

### 3.1.9 Compressed Gases Requiring Oxidation

Table 3.1.9-1 Treatability Groups for Compressed Gases Requiring Oxidation

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
Compressed Gases Requiring Oxidation	LA-W918	D001, U226	0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

### 3.1.10 Elemental Mercury

Table 3.1.10-1 Treatability Groups for Elemental Mercury

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
Elemental Mercury	LA-W920 LA-W920-16	D006, D009, F005	0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

### 3.1.11 Halogenated Organic Liquids, Nonhalogenated Organic Liquids, Bulk Oils, Polychlorinated Biphenyl (PCB) Wastes with RCRA Components, Liquid and Solid Oxidizers

Table 3.1.11-1 Treatability Groups for Halogenated Organic Liquids, Nonhalogenated Organic Liquids, Bulk Oils, PCB Wastes with RCRA Components

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
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	0.00
Nonhalogenated Organic Liquids	LA-W908 LA-W908-18	D001, D002, D003, D004, D007, D008, D009, D011, D018, D038, D040, F002, F003, F004, F005, U002, U019, U154, U169, U188, U220, U246	0.00
Bulk Oils	LA-W909 LA-W909-15 LA-W909-16 LA-W909-17	D002, D004, D005, D006, D007, D008, D009, D010, D011, D021, D027, D039, F001, F002, F003, F005	0.00
PCB Wastes With RCRA Components	LA-W910 LA-W910-16	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	0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

Table 3.1.11-2 Additional Treatability Groups

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
Liquid And Solid Oxidizers	LA-W923	D001, D003, D005	0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

### 3.2 Mixed Waste Requiring Further Characterization or for Which Technology Assessment Has Not Been Done

Table 3.2-1 Treatability Groups for Waste Requiring Characterization or Assessment

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
Lead Wastes – to be determined (TBD)	LA-W924	D003, D008	0.00
Mercury Wastes - TBD	LA-W925-0	D007, D008, D009, F001	0.00
Compressed Gases - TBD	LA-W926	D001, D007, D009, D022, P056, U080, U226	0.00
Biochemical Laboratory Wastes	LA-W927	D001, D003	0.00
Dewatered Treatment Sludge	LA-W928		0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

Table 3.2-2 Additional Wastes Requiring Characterization or Assessment

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
Lead Wastes - TBD	LA-W924-15	D003, D008	0.00
	LA-W924-16		0.00
	LA-W924-17		0.00
Mercury Wastes – TBD	LA-W925-4	D003, D007, D008, D009 F001, F002, F005	0.00
	LA-W925-5		
	LA-W925-6		
	LA-W925-15		
	LA-W925-16		
	LA-W925-17		
Explosives	LA-W932	D003	0.00
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	0.00
	LA-W933-17		
High Activity Waste	LA-W934	D001, D003, D008, D009	1.301
	LA-W934-16		
	LA-W934-19		
	LA-W934-20		
	LA-W934-24		
<b>Totals</b>			<b>1.301</b>

\*MWIR is Mixed Waste Inventory Report



Table 3.2-3 Activities and Compliance Dates for Wastes Requiring Characterization or Assessment

Activity	Compliance Dates
A. Complete shipping of wastes to an offsite treatment facility, or submit documentation assigning waste items to applicable treatability groups or complete parallel option.	June 30, 2018
B. Provide documentation to NMED that waste was received at offsite facility or provide notification of parallel option.	Within 45 days of receipt of waste at offsite facility or within 45 days after completion of parallel option.

LANL's inventory of *High Activity Waste* consists of five containers with a combined volume of 1.301 m<sup>3</sup>. Assuming that shipping issues can be resolved, LANL expects to meet the June 30, 2018, milestone for the remaining *High Activity Waste*.

DOE/LANS continues to diligently pursue all possible options to ship the waste offsite prior to the milestone for the remaining five containers (tritium traps with mercury contamination and the mole sieves and squib assemblies with very high tritium). The contract DOE/LANS has in place with Perma-Fix will allow for LANL to ship the High Activity Waste offsite for treatment and disposal. Perma-Fix has completed the characterization (evaluation including calculations and certification statement identifying all hazardous and radioactive characteristics of the waste), the transportation plan that addresses all aspects of the Department of Transportation requirements to compliantly package and ship the waste, and the Nuclear Regulatory Commission permit with the State of Tennessee for a tritium project-specific license required to handle the curie content in the High Activity Waste. Perma-Fix is in the process of preparing Certificate of Compliance modifications for the selected 10-160B cask for transport to the commercial treatment facility. The Type B Cask (TRU PAC II) became unavailable for use so the 10-160B cask is being pursued as the shipping method for this high activity waste.

### 3.3 Plans for Other Types of Activities

The following subsection summarizes plans for other types of activities.

#### 3.3.1 Lead Decontamination

Table 3.3.1-1 Treatability Groups for Lead Decontamination

Treatability Group	MWIR* Waste ID	First Category	Second Category	Totals
		Net Volume (m <sup>3</sup> )	Net Volume (m <sup>3</sup> )	Net Volume (m <sup>3</sup> )
Lead For Surface Decontamination	LA-W930-0	0.00	0.00	0.00
	LA-W930-5			
<b>Totals</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

**Treatment:** Any lead not acceptable for onsite or offsite lead decontamination, and any lead unsuccessfully decontaminated, will be designated in the following two categories: 1) for treatment and disposal at an offsite facility or 2) for recycle through an offsite 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.

Table 3.3.1-2 Additional Wastes for Lead Decontamination

Treatability Group	MWIR* Waste ID	First Category	Second Category	Totals
		Net Volume (m <sup>3</sup> )	Net Volume (m <sup>3</sup> )	Net Volume (m <sup>3</sup> )
Lead For Surface Decontamination	LA-W930-6	0.00	0.00	0.00
<b>Totals</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

### 3.3.2 Sorting, Surveying, and Decontamination

Table 3.3.2-1 Treatability Groups for Sorting, Surveying, and Decontamination

Treatability Group	MWIR* Waste ID	Net Volume (m <sup>3</sup> )
Nonradioactive or Suspect Waste Items To Be Surveyed	LA-W929-0(1)	0.00
Nonradioactive or Suspect Waste Items To Receive RCRA and Radiological Characterization	LA-W929-0(2)	0.00
Nonradioactive or Suspect Waste Items That Cannot or Should Not Be Sampled	LA-W929-0(3)	0.00
<b>Totals</b>		<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

Table 3.3.2-2 Additional Wastes for Sorting, Surveying, and Decontamination

Treatability Group	MWIR* Waste ID	Net Volume (m <sup>3</sup> )
Nonradioactive or Suspect Waste Items	LA-W929-5	0.00
<b>Totals</b>		<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

### 3.3.3 Lead Requiring Sorting

Table 3.3.3-1 Treatability Groups for Lead Requiring Sorting

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
Lead Requiring Sorting	LA-W931	D008	0.00
<b>Totals</b>			<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

**Treatment:** Wastes in this treatability group will require different treatment processes. Drums will be opened, the contents removed, and the waste repackaged based on appropriate treatment requirements. Wastes in this treatability group are primarily lead pieces, lead shot, and lead-contaminated soils that were packaged in the same drum.

The wastes will be reclassified as the applicable treatability group after physical separation and repackaging. The wastes will be treated by appropriate technology.

3.3.4 10–100 nCi/g Waste

Table 3.3.4-1 Treatability Groups for 10–100 nCi/g Waste

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m <sup>3</sup> )
10–100 nCi/g	LA-W935 LA-W935-19 LA-W935-20 LA-W935-21 LA-W935-22 LA-W935-23 LA-W935-24 LA-W935-25 LA-W935-26	D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D026, D027, D028, D029, D030, D035, D036, D037, D038, D039, D040, D043, F001, F002, F004, F005, F006, F007, F009	33.140
<b>Totals</b>			<b>33.140</b>

\*MWIR is Mixed Waste Inventory Report

**Treatment:** Wastes in this treatability group consist of a population of legacy drums packaged and managed as MTRU (>100 nCi/g) but, after assay, were determined to be MLLW (<100 nCi/g). Once confirmed, these drums are segregated from other TRU waste and stored in a designated MLLW storage area. Waste Profiles are prepared to allow acceptance into the low-level waste population, and drums are relabeled appropriately. The drum is reclassified from TRU to MLLW in the database.

When a parent waste container is remediated, the waste contents are removed, WIPP-prohibited items are addressed, and the remaining waste is placed into one or more new containers. After this process is complete, the original parent waste container remains radiologically contaminated and usually can be managed as LLW. Empty containers are being managed as “RCRA empty” containers if they meet the “RCRA empty” criteria in 40 CFR 261.7. Empty containers that have lead liners must carry an EPA hazardous waste number (HWN) for lead (D008), and be managed as MLLW. If after real-time radiography assay, empty containers are found to still contain residual amounts of waste material that do not meet the “RCRA empty” criteria, the containers are to be labeled with the EPA HWN assigned to the original parent container, as indicated by the parent’s waste stream profile (in addition to D008, if the D008 HWN is added to the empty parent only because of the presence of a lead liner). Movements of LA-W935 waste onsite at Area G have been restricted beginning early in calendar year 2015, and continuing beyond FY15, while issues with the Area G Safety Basis are analyzed and corrected. This restriction will delay the final confirmation, characterization, certification, and offsite shipment of these containers until the Safety Basis issues are resolved and the restrictions on moving and managing this waste are lifted. Although the restrictions on shipping the MLLW containers (that may be related to remediated TRU containers that contained nitrate salts) during the investigation into the cause of the drum event at WIPP were lifted in FY15, the Safety Basis issues that restrict moving and managing waste in Area G prevented all waste processing in FY15.

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The MLLW drums are prepared for treatment and disposal to an offsite facility using LANL generator CCP-A acceptable knowledge documentation and real-time radiography and non-destructive assay data.

Table 3.3.4-2 Activities and Compliance Dates for 10–100 nCi/g Waste

Activity	Compliance Dates
A. Complete radiological characterization.	September 1, 2018
B. Complete shipment of existing waste to offsite facility for treatment, or complete parallel options.	September 30, 2018
C. Provide documentation to NMED that waste was received at offsite facility or provide notification of parallel option.	Within 45 days of receipt of waste at treatment facility or within 45 days after completion of parallel option.

The estimated waste volumes will be subtracted from the MTRU STP inventory and added to the MLLW STP inventory as the waste is reclassified as MLLW. However, because of the repacking process, the apparent volume of waste will reflect the number of additional containers needed to repack the waste into compliant configurations for transportation and disposal. Empty TRU containers, which includes a population of empty TRU parent containers that previously contained nitrate salts will also undergo recharacterization and may be reclassified as LLW or if determined to not meet the definition of RCRA-empties will be reclassified as MLLW. The ongoing-repackaging and recharacterization process will resume in FY16 for waste to be accepted at offsite treatment and disposal facilities, and will continue to produce 10–100 nCi/g Waste (LA-W935); therefore, DOE/LANS may will seek updates to milestone(s) annually.

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### 3.4 Management of “Missing” Items

Table 3.4-1 Waste Category for “Missing Waste”

Category	MWIR* Waste ID	Net Volume (m <sup>3</sup> )
Missing/Nonexistent/To be verified (TBV)	None	0.00
<b>Totals</b>		<b>0.00</b>

\*MWIR is Mixed Waste Inventory Report

**Treatment:** 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 expected containers, according to the LANL data files for the waste item. In some instances, such items cannot be verified as having been received in storage at LANL, and follow-up investigations of the record files reveal that although they were included in the original STP inventory, the waste items were never generated.

Some waste items were determined not to exist after visual inspection and document review. When DOE/LANS determines 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 verified the absence of all “Missing/nonexistent/TBV” items container by container as each STP waste item was being sampled, repackaged, or otherwise prepared for onsite or offsite treatment. The final verification of all “Missing/nonexistent/TBV” items was completed by 2004. All missing or nonexistent items were deleted from the STP. All remaining MLLW items in the original STP inventory were treated and disposed of.

If, at any time, any of these items is discovered in the inventory, NMED would be notified and approval would be requested for assignment of the rediscovered items to the appropriate treatability group. If

necessary, ~~discovered items~~ they would be assigned new Activities and Compliance Dates in accordance with the terms of the FFCO.

#### 4.0 MIXED TRANSURANIC WASTE

**Treatment Group(s):** Assorted MTRU Waste

**Offsite Disposal:** MTRU waste at LANL will be shipped for disposal at WIPP, located in Carlsbad, New Mexico.

**Disposal:** Waste volumes listed in Table 4.0-1 constitute the remaining original population of the Framework Agreement of “non-cemented above-ground EM Legacy TRU” and “above-ground cemented EM Legacy TRU” that is MTRU waste only. Volume adjustments noted below are due to corrections of database entries, treatability group, EPA codes, overpacks removed/added, containers repacked and shipped/hold for waste items identified as the non-cemented and cemented above-ground EM Legacy TRU for MTRU STP waste.

Table 4.0-1 Treatability Groups for The Framework Agreement MTRU Waste (remaining original containers)

Treatability Group	CP Section	FY14 Shipped (on hold) <sup>1</sup>	FY14 Volume (m <sup>3</sup> )	FY15 Administrative Adjustments	FY15 Total Volume (m <sup>3</sup> )
Cemented Sludge	4.0	0.000	0.000	0.000	0.000
Combustible – Noncombustible Waste	4.0	30.736	21.298	11.640	63.674
Combustible Waste	4.0	0.000	0.208	0.000	0.208
Metallic Waste	4.0	0.208	0.000	0.000	0.208
Noncombustible Waste	4.0	1.040	0.208	0.000	1.248
Solidified Inorganic and Organic Waste	4.0	9.588	10.312	0.000	19.900
<b>Totals</b>				<b>73.598<sup>2</sup></b>	<b>85.238</b>

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<sup>1</sup>This waste was shipped offsite to WIPP or a WCS facility but has not yet been disposed. Therefore, the volume is not to be subtracted from the STP inventory. Removal of waste from the STP inventory is on hold until NMED approval is received.

<sup>2</sup>Total volume is the sum of both columns: FY14 Shipped (on hold) and FY14 Volumes.

Table 4.0-2 Activities and Compliance Dates for MTRU Inventory at TA-55 and CMR from Table E-2

Activity	Compliance Dates
A. Complete transfer of existing waste (excluding Metallic Waste) to TA-54 facility	September 30, 2017
C. Complete transfer of Metallic Waste to CMR for material retrieval	November 30, 2018

**Transfer of Covered MTRU Inventory:** The FY15 reported waste volume for STP-covered MTRU inventory at TA-55 and CMR is 45.844 m<sup>3</sup>. In FY15, approximately 22 m<sup>3</sup> of the 36 m<sup>3</sup> of STP waste at TA-55 is associated with the CVD Project (formerly referred to as the Bolas Grande Project), that started in the summer of FY14. A milestone extension request to November 30, 2018, is proposed as discussed in the CP Update Part II, Section 5.0. The remainder of the covered MTRU waste inventory at TA-55

consists of radioactive-free liquids, requiring management at the Waste Characterization, Reduction, and Repacking Facility (WCRRF). WCRRF is currently not receiving waste until it has implemented corrective actions as directed by the DOE’s Accident Investigation Board, including updating its Safety Basis documents. TA-54 is updating its Safety Basis documents that govern Material at Risk and its Composite Source Term Limits (amount of combustible waste that can be stored at TA-54). This updating process has temporarily stopped or significantly reduced the receipt of LANL-generated TRU and MTRU waste at TA-54. Therefore, newly-generated MTRU waste is primarily being stored at TA-55 until the TA-63 TRU Waste Facility becomes operational.

#### 4.1 Management of “Missing” Items

Table 4.1-2 Waste Category for “Missing Waste”

Category	Treatability Groups	Net Volume (m <sup>3</sup> )
Missing/Nonexistent/TBV	Cemented Sludge	0.00
	Combustible-Noncombustible Waste	0.000
	Combustible Waste	0.000
<b>Totals</b>		<b>0.000</b>

**Treatment:** During visual inspections in support of STP waste work-off, occasionally an item cannot be found, or it is not located in the expected containers, according to the LANL data files for the waste item. In some instances, such items cannot be verified as having been received in storage at LANL, and follow-up investigations of the record files reveal that although the items were included in the original STP inventory, the waste items were never generated.

Some items were determined not to exist after visual inspection and document review. When LANS determines that an STP-covered waste item does not exist, transfer of the item to the category called “Missing/nonexistent/TBV” is requested through this revision Annual Update.

If, at any time, any of these items is discovered in the inventory, NMED would be notified and approval requested for assignment of the rediscovered items to the appropriate treatability group.

Table 4.1-2 Waste Category for “Missing Waste” – Detail [Table Omitted]

## APPENDICES

**APPENDIX A CURRENT YEAR MLLW INVENTORY DETAIL**

Table A-1 FY15 MLLW Inventory Detailed Update by Treatability Group

CP <sup>1</sup> Sec.	MWIR <sup>1</sup> Waste ID and Treatability Group/Category	FY14 <sup>3</sup> Annual Update (m <sup>3</sup> ) <sup>2</sup>	Proposed Revision 2015.0 (m <sup>3</sup> )	Comments <sup>3</sup>	FY15 <sup>4</sup> Annual Update (m <sup>3</sup> )	Projection FY16 <sup>5</sup> - FY2019 (m <sup>3</sup> )
3.1.1	LA-W901 <i>IPA Wastes</i>	0	0		0	0
3.1.1	LA-W902 <i>Scintillation Fluids</i>	0	0		0	0
3.1.2	LA-W903 <i>Lead Blankets</i>	0	0		0	0
3.1.2	LA-W904 <i>Soil with Heavy Metals</i>	0	0		0	0
3.1.2	LA-W905 <i>ER Soils</i>	0	0		0	0
3.1.3	LA-W906 <i>Aqueous Organic Liquids</i>	0	0		0	0
3.1.4	LA-W911 <i>Organic-Contaminated Combustible Solids</i>	0	0		0	0
3.1.4	LA-W919 <i>Organic-Contaminated Noncombustible Solids</i>	0	0		0	0
3.1.5	LA-W912 <i>Combustible Debris</i>	0	0		0	0
3.1.5	LA-W921 <i>Activated or Inseparable Lead</i>	0	0		0	0
3.1.5	LA-W922 <i>Noncombustible Debris</i>	0	0	Administrative Adjustment	0	0
			0	Shipped offsite for treatment/disposal		
3.1.6	LA-W913 <i>Aqueous Wastes with Heavy Metals</i>	0	0		0	0
3.1.6	LA-W914 <i>Corrosive Solutions</i>	0	0		0	0
3.1.6	LA-W915 <i>Aqueous Cyanides, Nitrates, Chromates, and Arsenates</i>	0	0		0	0
3.1.7	LA-W916 <i>Water-Reactive Wastes</i>	0	0		0	0



CP <sup>1</sup> Sec.	MWIR <sup>1</sup> Waste ID and Treatability Group/Category	FY14 <sup>3</sup> Annual Update (m <sup>3</sup> ) <sup>2</sup>	Proposed Revision 20 <sup>5</sup> .0 (m <sup>3</sup> )	Comments <sup>3</sup>	FY15 <sup>4</sup> Annual Update (m <sup>3</sup> )	Projection FY16 <sup>5</sup> - FY2019 (m <sup>3</sup> )
3.1.8	LA-W917 <sup>4</sup> <i>Compressed Gases Requiring Scrubbing</i>	0.833	0.415	Administrative Adjustment	1.248	0
			0	Shipped offsite for treatment/disposal		
3.1.9	LA-W918 <i>Compressed Gases Requiring Oxidation</i>	0	0		0	0
3.1.10	LA-W920 <i>Elemental Mercury</i>	0	0		0	0
3.1.11	LA-W907 <i>Halogenated Organic Liquids</i>	0	0		0	0
3.1.11	LA-W908 <i>Nonhalogenated Organic Liquids</i>	0	0		0	0
3.1.11	LA-W909 <i>Bulk Oils</i>	0	0		0	0
3.1.11	LA-W910 <i>PCB Wastes with RCRA Components</i>	0	0		0	0
3.1.11	LA-W923 <i>Liquid and Solid Oxidizers</i>	0	0		0	0
3.2	LA-W924 <i>Lead Wastes – TBD</i>	0	0		0	0
3.2	LA-W925 <i>Mercury Wastes – TBD</i>	0	0		0	0
3.2	LA-W926 <i>Compressed Gases – TBD</i>	0	0		0	0
3.2	LA-W927 <i>Biochemical Laboratory Wastes</i>	0	0		0	0
3.2	LA-W928 <i>Dewatered Treatment Sludge</i>	0	0		0	0
3.2	LA-W932 <i>Explosives</i>	0	0		0	0
3.2	LA-W933 <i>Labpacks</i>	0	0		0	0
3.2	LA-W934 <i>High Activity Waste</i>	1.301	0	Shipped offsite for treatment/disposal	1.301	0
			0	Administrative Adjustment		
3.3.1	LA-W930 <i>Lead for Surface Decontamination</i>	0	0		0	0

CP <sup>1</sup> Sec.	MWIR <sup>1</sup> Waste ID and Treatability Group/Category	FY14 <sup>3</sup> Annual Update (m <sup>3</sup> ) <sup>2</sup>	Proposed Revision 20 <del>15</del> .0 (m <sup>3</sup> )	Comments <sup>3</sup>	FY15 <sup>4</sup> Annual Update (m <sup>3</sup> )	Projection FY16 <sup>5</sup> - FY2019 (m <sup>3</sup> )
3.3.2	LA-W929 <i>Nonradioactive or Suspect Waste Items to be Surveyed</i>	0	0		0	0
3.3.3	LA-W931 <i>Lead Requiring Sorting</i>	0	0		0	0
3.3.4	LA-W935 <i>10-100 nCi/g Waste</i>	11,545	20,951	Administrative Adjustment	33,140	50
			0,644	New covered		
			0	Shipped offsite for treatment/disposal		
3.4	<i>Missing/ nonexistent/ TBV category</i>	0	0		0	N/A
<b>TOTALS</b>		<b>13,679</b>			<b>35,689</b>	

<sup>1</sup> CP is Compliance Plan; MWIR is Mixed Waste Inventory Report.

<sup>2</sup> MLLW volumes are calculated using the conversion: 55-gallon container = 0.208 m<sup>3</sup>; 85-gallon container = 0.322 m<sup>3</sup>.

<sup>3</sup> Shipment details are in Appendix B; Administrative adjustments are in Appendix C.

<sup>4</sup> Items prohibited from shipment to WIPP are removed from MTRU STP containers and consolidated; some are MLLW and are included in Table A-1 as LA-W917 waste; others are MTRU waste and are considered *Combustible-Noncombustible Waste* in Table E-1.

**APPENDIX B CURRENT YEAR MLLW SHIPMENT DETAIL**

*Table B-1 MLLW Shipped Offsite for Treatment and Disposal in FY15<sup>1</sup>*

CP Section	MWIR* No.	Treatability Group	Manifest Number	Destination	Date Shipped	Date NMED Notified	Volume (m <sup>3</sup> )
3.1.8	LA-W917	<i>Compressed Gases Requiring Scrubbing Waste</i>					
<b>LA-W917 Total</b>							<b>0</b>
3.1.5	LA-W922	<i>Noncombustible Debris</i>					
<b>LA-W922 Total</b>							<b>0</b>
3.3.4	LA-W935	<i>10-100 nCi/g Waste</i>					
<b>LA-W935 Total</b>							<b>0</b>
<b>Grand Total</b>							<b>0</b>

\*MWIR is Mixed Waste Inventory Report.

<sup>1</sup>DOE/LANS have not shipped MLLW STP covered waste during FY15.

**APPENDIX C CURRENT YEAR MLLW ADMINISTRATIVE ADJUSTMENTS**

Table C-1 Administrative Adjustments

CP Section	MWIR* Number	Administrative Adjustment	Volume (m <sup>3</sup> )
3.3.4	LA-W935	Transferred from LA-W935 to LA-W917 as a result of treatability group reassignment	-0.208
		Removed as a result of reconciliation of inconsistencies in the current inventory	-2.549
		Added into LA-W935 from (real-time radiography) recharacterization process	19.414
		Transferred into LA-W935 from reclassification of MTRU waste	4.294
<b>Total Net Adjustments for LA-W935</b>			<b>20.951</b>
3.1.8	LA-W917	Transferred from LA-W935 to LA-W917 as a result of treatability group reassignment	0.208
		Volume changes due to addition or removal of packaging MLLW waste	0.207
<b>Total Net Adjustments for LA-W917</b>			<b>0.415</b>
<b>Total Net Adjustments</b>			<b>21.366</b>

\*MWIR is Mixed Waste Inventory Report