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~~March 7,~~December 2019

Los Alamos National Laboratory Federal Facility Compliance Order Annual Site Treatment Plan Update for Fiscal Year 2018~~7~~ Revision~~.~~ 29.0

CONTENTS

TABLES

Part I

ACRONYMS

40 CFR	Title 40 of the Code of Federal Regulations
AMWTP	Advanced Mixed Waste Treatment Plant
CCA	Compliance Certification Application
CMR	Chemistry and Metallurgy Research (Building)
CP	Compliance Plan
CVD	Confinement Vessel Disposition (project)
DOE	U.S. Department of Energy
DOE EM	U.S. Department of Energy Environmental Programs
EM	Environmental Management
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration
FFCA	Federal Facility Compliance Act
FFCO	Federal Facility Compliance Order
FTWC	flanged tritium waste container
FY	fiscal year
HWA	Hazardous Waste Act
HWB	Hazardous Waste Bureau
HWN	hazardous waste number
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
N3B	Newport News Nuclear BWXT-Los Alamos, LLC

PCB	polychlorinated biphenyl
RCRA	Resource Conservation and Recovery Act
~~RNS~~	~~Remediated Nitrate Salt~~
STP	Site Treatment Plan
SWB	standard waste box
TA	Technical Area
TBD	to be determined
TBV	to be verified
TRU	transuranic
TWF	Transuranic Waste Facility
UC	University of California
WCRRF	Waste Characterization, Reduction, and Repacking Facility
WCATS	Waste Compliance and Tracking System
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.

On April 30, 2018, Newport News Nuclear BWXT-Los Alamos, LLC (N3B) became the prime contractor for the DOE Environmental Management Los Alamos Field Office (EM-LA), and is responsible for LANL site-wide cleanup as well as waste management and shipping of legacy STP and remediation wastes at Technical Area 54 (TA-54), Areas G and L. Per the LANS/N3B Service Agreement/Work Authorizations signed April 30, 2018, N3B became the lead contractor for FFCO compliance. As of November 1, 2018, Triad National Security, LLC (Triad) became the new prime contractor for DOE National Nuclear Security Administration (NNSA), replacing LANS.

At present, N3B is responsible for all quarterly and annual FFCO STP reporting requirements, working closely with Triad to fulfill FFCO requirements for all LANL STP requirements. For this document, LANS, instead of Triad, will be referenced for federal fiscal year 2018 (FY18). The FY19 update will reference Triad. In this update, N3B and LANS, as well as EM-LA and NNSA, will collectively be referred to as "the Respondents."

The FFCO required ~~DOE/LANS~~the Respondents 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 (~~the 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 on October 4, 1995.

Section VII of the FFCO requires ~~DOE/LANS~~the Respondents 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 29~~8~~.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. In an effort to correct these inconsistencies and streamline the STP reporting process, ~~DOE/LANS~~Respondents will work on incorporating the STP Report function within the ~~w~~Waste Complaince and~~characterization~~ ~~t~~Tracking ~~s~~System (WCATS).

2.0 AMOUNT OF EACH COVERED WASTE STORED AT LANL

2.1 Mixed Low-Level Waste Inventory

During FY18~~7~~, STP-covered mixed low-level waste (MLLW) inventor~~y~~ies increased from ~~approximately 60~~ 175.033 m^3 (FY17) to ~~172.527~~231.491 m^3. This~~e~~ increase was ~~mainly~~ due to N3B new-covered waste addition of 9.027 m^3 plus administrative adjustments of 47.431m^3. ~~the recharacterization process of transuranic (TRU)/MTRU waste that resumed in FY16 for waste to be accepted at offsite treatment and disposal facilities.~~

The transuranic (TRU)/MTRU recharacterization process will continue to produce 10-100 nCi/g waste (LA-W935). The TRU/MTRU recharacterization process was due to a backlog of waste as a result of previous ~~————~~shipping pauses, limited shipments to WIPP, and past restrictions on-site at TA-54, Area G. These~~is~~ restrictions delayed the final confirmation, characterization, certification, and shipment for off-site treatment and disposal of these containers. Table 2.1-1 summarizes changes to the estimated FY18~~7~~ STP-covered MLLW inventory.

Appendix A provides the detailed changes to the FY18~~7~~ covered MLLW inventory by treatability group, including the inventory at ~~Technical Area 55~~ TA-55, ~~and~~ the Chemistry and Metallurgy Research (CMR) Building, and the Transuranic Waste Facility (TWF). Appendix B (Table B-1) lists the FY18~~6~~ MLLW shipments. A~~ny a~~dministrative 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 FY17~~5~~ Annual Update is included as Appendix D.

Table 2.1-1 FY18~~7~~ MLLW Inventory Summary

~~Contribution~~	~~Volume (m^3)~~[1]
~~Estimated MLLW Inventory Reported in the FY16 Annual Update~~	~~59.927~~
~~Proposed Revision 28.0~~	
~~New-Covered Waste~~	~~36.779~~
~~Administrative Adjustments~~[2]	~~19.277~~
~~Offsite Treatment~~	~~-48.119~~
~~Reconciled from WCATS inventory~~	~~104.662~~
~~Offsite Recycle~~	~~NA~~[3]
~~Onsite Decontamination~~	~~NA~~[3]
~~Treatability Study Use~~	~~NA~~[3]
~~**Estimated MLLW Inventory Reported in FY17 Annual Update**~~	~~**172.527**~~

~~[1] MLLW volumes are calculated using the conversion: 55-gallon container = 0.208 m^3; 85-gallon container = 0.322~~
~~[2] Includes transfers of MTRU and other wastes into MLLW categories~~
~~[3] NA = No Activity~~

Contribution	Volume (m^3) [1]
MLLW Inventory Reported in FY17 Annual Update	175.033
Proposed Revision 29.0	
N3B New-Covered Waste	9.027
LANS New-Covered Waste	58.753
N3B Administrative Adjustments [2]	20.891~~89~~
LANS Administrative Adjustments [2]	~~0~~26.540
N3B Off-site Treatment	0
LANS Off-site Treatment	-58.753
Off-site Recycle	NA [1~~3~~]
Onsite Decontamination	NA [1~~3~~]
Treatability Study Use	NA [1~~3~~]
MLLW Inventory Reported in FY18 Annual Update	**~~204.9~~231.491~~49~~**

[1] NA = No Activity
Note: Calculations have been rounded to three places after the decimal point.

2.2 Mixed Transuranic (MTRU) Inventory Summary

During FY18~~7~~, STP-covered MTRU inventories increased from approximately ~~961~~1441.738 m^3 to ~~1,828.184~~1798.802- m^3(Table 2.2-1). This increase was due to the addition of new covered waste at TA-54 and TA-55, CMR and TWF, and administrative adjustments at TA-54.

In the "*Los Alamos National Laboratory Federal Facility Compliance Order Annual Site Treatment Plan Update for Fiscal Year 2017 Rev. 28.0*," the total FY17 Inventory in Appendix E, Table E-1 should have been reported as 1247.409 m^3 instead of 1273.537 m^3. A shipment of 26.128 m^3 MTRU waste was

entered in Appendix F, Table F-1, but inadvertently omitted from Appendix E, Table E-1. In this FY18 report, Appendix E, Table E-1 has been updated with the correct FY17 Annual Report Total Inventory of 1247.409 m^3. The summation of Table E-1 and E-2 for the FY17 Annual Report is 1441.738 m^3. Therefore, the above STP-covered MTRU inventory for FY17 of 1441.738 m^3 is correct.

Table 2.2-1 summarizes changes to the estimated FY18~~7~~ MTRU covered waste inventory. The total volume of MTRU waste in Table 2.2-1 includes the CMR, ~~and~~ TA-55, and TWF 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, and TWF. 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 FY18~~7~~ 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, and ~~/~~TWF MTRU inventory data, respectively. STP-covered MTRU inventory increased because of the WIPP shutdown ~~as of~~on February 14, 2014~~.~~; Respondent shipments to WIPP resumed in October 2018. ~~DOE/LANS have shipped 23 55-gallon containers, 19 Standard Waste Boxes (SWB) and 1 Ten Drum Overpack (TDOP) from WCS to WIPP during the fourth quarter of fiscal year (FY) 2017 from July 1, 2017, to September 30, 2017. In addition, one non-hazardous waste shipment was completed as of December 31, 2017 to WIPP~~

Administrative adjustments typically represent the following types of activities:

- ~~DOE/LANS~~Respondents may correct database entries so that waste items not previously listed as STP waste are now identified as STP waste.
- ~~DOE/LANS~~Respondents may correct waste data, such as volume or EPA codes, through quality control activities. Under DOE S~~s~~tandards, 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 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~~.~~.

Table 2.2-1 Covered MTRU Inventory Summary

~~**Description**~~		~~**Volume (m^3)**~~
~~Covered MTRU Inventory Reported in FY16 (69.447 m^3 at CMR/TA-55 and 817 m^3 at TA-54)~~		~~961.264~~
~~**New-Covered** MTRU Waste at TA-54~~		~~381.719~~
~~**New-Covered** MTRU Waste at CMR/TA-55~~		~~133.292~~
~~Covered MTRU Waste Shipped to WIPP in FY17 below grade~~		~~-26.128~~
~~Covered MTRU Waste Shipped to WIPP in FY14 remaining above grade (on hold per NMED)~~	~~9.048*~~	
~~Covered MTRU Waste Shipped to Waste Control Specialists, LLC (WCS), Texas in FY14 (on hold per NMED)~~	~~155.718*~~	~~-92.006~~
~~Covered MTRU Waste Shipped to the Advanced Mixed Waste Treatment Plant (AMWTP), Idaho in FY14 (on hold per NMED)~~	~~22.892*~~	~~-22.892~~
~~Net Administrative Adjustments for TA-54 in FY17~~		~~378.037~~
~~Net Administrative Adjustments for CMR/TA-55 in FY17~~		~~0.000~~
~~**Covered MTRU Inventory at End of FY17**~~		~~**1,828.184**~~

~~*Volume not to be subtracted from the STP inventory. Removal of this waste from STP inventory is on hold until NMED approval is received.~~**Description**	**Volume (m^3)**
Covered MTRU Inventory Reported in FY17 at TA-54	1247.409
Covered MTRU Inventory Reported in FY17 at TA-55/CMR/TWF	194.329
New-Covered MTRU Waste at TA-54	42.928~~62.688~~
New-Covered MTRU Waste at CMR/TA-55/TWF	173.170

~~Description~~		~~Volume (m^3)~~
Covered MTRU Waste removed from inventory (Shipped to WIPP) in FY18		~~-49.536~~9.536
Covered MTRU Inventory Reported in FY17 at WCS ~~1~~(FY14 on Hold)	96.658 *	~~96.658~~
Covered MTRU Waste Shipped from WCS ~~1~~ to WIPP in FY18 (FY14 on Hold)	~~-~~49.536 *	~~-49.536~~
Covered MTRU Waste Shipped to the Advanced Mixed Waste Treatment Plant (AMWTP), Idaho in FY14	0*	~~0~~
Net Administrative Adjustments for TA-54 in FY18		196.900
~~Net Administrative Adjustments for CMR/TA-55/TWF in FY18~~This is the transfer of two CVDs from TA-55 to CMR where it is removed from the STP (each CVD is 3.199m^3)		-6.398
Covered MTRU Inventory at End of FY18		**~~1856.972~~1798.802**

* Volume not to be subtracted from the STP inventory. Removal of this waste from STP inventory is on hold until NMED approval is received.

Note: Calculations have been rounded to three places after the decimal point.

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'~~increase into more volume than the original container. For example, repacking one container of *Cemented Sludge* (0.208 m^3) may result in one drum of *Combined Combustible-Noncombustible Waste* (0.208 m^3) and one drum of *Noncombustible Waste* (0.208 m^3). 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.

3.0 TREATMENT PROGRESS

3.1 Off-site Treatment

During FY18~~7~~, covered MLLW stream were shipped for treatment and/or disposal to the following off-site commercial treatment facilities: Perma-Fix Florida ~~Northwest~~, Waste Control Specialists, and Energy Solutions. See Appendix H, Table H-1 for commerical facilities contacted for waste treatment capabilities.

Appendix B summarizes LANL's off-site shipments for treatment and/or disposal of covered MLLW in FY18.

~~**Perma-Fix Northwest**~~

~~**Perma-Fix Northwest, located in Richland, Washington, is a permitted treatment facility for the treatment of low-level radioactive and low-level mixed waste. The site houses both a low-level radioactive waste treatment facility and a low-level mixed waste**~~

~~treatment facility, which are licensed under Nuclear Regulatory Commission regulations (State of Washington licenses WN-I00393-1 and WN-I00508-1) and permitted under RCRA regulations through the State of Washington. The facility can perform thermal treatment, compaction, macroencapsulation, neutralization, and stabilization.~~

~~Waste Control Solutions, LLC (WSC)~~

~~WCS, located in Andrews, Texas, is a permitted treatment facility for the treatment and disposal of LLW and MLLW. The site has regulatory authorization for industrial solid~~

~~waste and hazardous waste storage, processing, and land disposal under RCRA permit # HW-50358 granted by the state of Texas. EPA has authorized the site for treatment, storage, and land disposal of Toxic Substances Control Acit (TSCA) wastes (TXD988088464). The facility can process waste that requires compaction, microencapsulation, macroencapsulation, neutralization, deactivation, chemical oxidation, chemical reduction and stabilization.~~

~~Energy Solutions, LLC~~

~~Energy Solutions, located in Clive, Utah, is a permitted treatment facility for the treatment and disposal of LLW and MLLW. The site houses both a low-level radioactive waste treatment facility and a low-level mixed waste treatment facility, which are licensed under state of Utah Department of Environmental Quality, License Number UT2300249 and by the EPA hazardous waste permit number UT0982598898.~~

~~Appendix B summarizes LANL's offsite shipments for treatment and/or disposal of covered MLLW in FY17.~~

3.2 Off-site Recycling

~~DOE/LANS~~Respondents did not recycle any STP-covered waste off-site in FY18~~7~~.

3.3 Onsite Treatment and Recycling

~~DOE/LANS~~Respondents did not treat or recycle any STP-covered waste on-site in FY18~~7~~.

3.4 Onsite Lead Decontamination

No LANL STP-covered waste was decontaminated on-site during FY18~~7~~.

3.5 Treatability Studies

~~DOE/LANS~~Respondents conducted no treatability studies in FY18~~7~~.

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 FY18~~7~~ STP Annual Update, ~~DOE/LANS~~Respondents 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 FY18~~7~~, the availability of commercial and federal facility off-site treatment and disposal capacity for MLLW remained stable. As a result of DOE's increasing reliance on commercial treatment and ~~/~~disposal for mixed wastes, nearly all funding for on-site technology development has been prioritized to support off-site 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/Developed

~~DOE/LANS~~Respondents continue~~s~~ 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~~Respondents are 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 dewatered liquids from cemented nitrate salt wastes remaining at LANL, as required by the January 22, 2016 Settlement Agreement and Stipulated Final Order, 14-20 (CO) between DOE/LANS and NMED's Hazardous Waste Bureau (HWB).

~~DOE/LANS~~Respondents 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 were developed for treatment of these wastes through the use of surrogates for the waste and both on-site and off-site testing facilities. These methods were evaluated for treatment effectiveness. After confirmation of the treatment process for these wastes, permitted on-site treatment was requested from the NMED-HWB and was granted in July 2016. ~~Commencement of treatment for remediated nitrate salt and unremediated~~

~~nitrate salt wastes is scheduled in 2017.~~Treatment for remediated nitrate salt-bearing wastes was conducted between May 2017 and November 2017. Treatment for unremediated nitrate salt-bearing wastes was conducted between December 2017 and March 2018.

4.1.1 Off-site Commercial Treatment Facilities

~~DOE/LANS~~Respondents continue~~s~~ to monitor the availability and capabilities of off-site 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 Off-site DOE Treatment Facilities

~~DOE/LANS~~Respondents continue~~s~~ to monitor the availability and capabilities of off-site 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) Texas facility until WIPP is re-opened to ready to accept waste. WIPP has placed these nine containers below ground in FY17.~~

5.0 DOE FUNDING FOR STP-RELATED ACTIVITIES

Funding to implement the LANL STP for mixed waste during FY18~~7~~ 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 at WIPP and LANL; DOE/N3B shipments continued as scheduled. ~~FY17~~ FY18 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 FY18~~7~~.

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. The WIPP is not a generator of TRU waste, and, therefore, will receive all ~~of the~~ waste in shipments from off-site. ~~O~~In 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~~ these 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 bec~~o~~ame~~s~~ available; ~~and it is~~NMED also determined that waste ~~currently~~ stored at the WCS facility and WIPP remain~~ing~~ed above grade ~~will not be~~and was not returned to LANL until approval to relocate below grade was obtained. All shipments of MTRU covered waste inventory to WIPP were suspended ~~in~~ between May 2014 and July 2018, due to the WIPP shutdown. ~~DOE/LANS is anticipated to be allowed one shipment per week starting September 2017.~~WIPP resumed operations in July 2018 ~~in September 2017.~~

7.1 Characterization Capabilities at WIPP

Wastes proposed for shipment to WIPP are characterized and certified at LANL by the Central Characterization Project, 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 in Section 6.1, 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 FY18~~6~~

During FY18~~7~~, no CP Activity milestones were scheduled.

2.2 Expedited Shipment Letters

Expedited shipment letters are listed in Appendix I, Table I-1.

2.3 Correspondence

Between October 1, 201~~76~~ and September 30, 20187, ~~DOE/LANS~~Respondents communicated with NMED on issues related to:

- FY18~~7~~ waste shipment notifications;
- FY18~~7~~ expedited waste shipment notifications;

This correspondence is listed in Appendix I (Tables I-2 and I-3). Previously listed correspondence can be found in the previous FY Annual Reports.

3.0 DESCRIPTION OF DELETED WASTE

A proposal for deletion of STP waste items is included with this update as Proposed Revision 29~~8~~.0 in accordance with FFCO Section IX, *Deletion of Waste*. These deletions are proposed because the wastes were shipped off-site 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 FY17~~6~~ and were proposed to become covered wastes in FY18~~7~~. 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.

~~I.~~ 5.0 PROPOSED CHANGES TO THE COMPLIANCE PLAN SCHEDULE

Funding to implement the LANL STP for mixed waste during FY18 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 at WIPP and LANL. DOE/N3B shipments continued as scheduled. FY18 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~~Respondents will notify NMED to address compliance schedules and activities.

~~DOE/LANS is proposing to revise three milestones: **Activity 3.1.8-2(A)** "complete transfer of existing waste to an offsite treatment facility or complete parallel option" compliance date to September 30, 2021, **Activity 3.3.4-2(A)** "complete radiological characterization" compliance date to September 30, 2022, and **Activity 3.3.4-2(B)** "complete shipment of existing waste to offsite facility for treatment, or complete parallel options" compliance date to September 30, 2022. These milestones address the MLLW waste inventory at TA-54. The contract for operation of TA-54 was awarded to DOE EM/N3B and became effective April 30, 2018.~~

~~I. Compliance Dates and Waste Description~~

~~**Activity3.1.8-2(A):** The MLLW containers covered under the "Compresses Gases Requiring Scrubbing" were generated during the 2010 repacking of MTRU STP inventory of WIPP-prohibited items. Three containers remain in this category. These containers must go through remediation, which will be online within the next year. N3B must submit a permit modification request for modifying the Hazardous Waste Facility Permit (HWFP) to treat these wastes. Readiness activities will be conducted by the DOE before starting operations.~~

~~Current proposed compliance date: September 30, 2018.~~

~~Proposed Revision 28 compliance date: September 30, 2021.~~

~~**Activities 3.3.4-2(A) and 3.3.4-2(B):** The majority of the STP covered MLLW at TA-54 consists primarily of 10-100 nCi/g (LA-W935) generated through the recharacterization/reclassification process of the legacy MTRU waste, which has been determined to no longer meet the criteria for TRU waste. Containers will be re-classes from MTRU to MLLW. N3B must submit a permit modification request for modifying the HWFP to treat these wastes. Readiness activities will be conducted by the DOE before starting operations.~~

~~Treatment facilities at TA-54 have not operated in several years; starting up treatment operations includes purchasing and installing treatment equipment and repair work. The facilities were off~~

~~line for several years, due to realigned priorities to address the manpower and funding required for addressing the Remediated Nitrate Salt (RNS) drums and the Unremediated Nitrate Salt (UNS) drums.~~

~~**Activity 3.3.4.2(A)**~~

~~Current proposed compliance date: September 1, 2018.~~

~~Proposed Revision 28 compliance date: September 30, 2022.~~

~~**Activity 3.3.4.2(B)**~~

~~Current proposed compliance date: September 30, 2018.~~

~~Proposed Revision 28 compliance date: September 30, 2022.~~

~~II. Disposal/Recovery/Treatment Process~~

~~**Activities3.1.8.2(A), 3.3.4.2(A) and 3.3.4.2(B):** DOE/LANS does not have treatment/disposal capabilities and continues to rely on commercial treatment/disposal pathways for the MLLW. DOE/LANS continues to monitor the availability and capacilities of offsite commercial facilitys for treatment technologies and permitting that are appropriate to DOE/LANS waste.~~

~~III. Availability of Noncommercial/Recovery/Commercial Facility~~

~~**Activity3.1.8.2(A), and Activities, 3.3.4.2(A) and 3.3.4.2(B):** There are commercial and federal facilities for available for offsite treatment and disposal of DOE/LANS MLLW. LANL/DOE treatment technology development initiatives are generally limited to specific technologies in response to specific needs that cannot be addressed through commercial facilities.~~

~~Justification for Milestone~~

~~**Activities3.1.8.2(A), 3.3.4.2(A) and 3.3.4.2(B):** Due to the 2014 WIPP shutdown DOE/LANS placed their focus and resources on the development of a treatment process for the RNS and UNS waste. In addition, the TRU/MTRU recharacterization process was slowed and created a backlog of waste due to the shipping pause, limited shipments to WIPP and restrictions onsite Area G. These developments and restrictions delayed the final confirmation , characterization, certification, and shipment for offsite treatment and disposal of these containers. TA-54 G is now under the management of the DOE Environmental Programs (DOE EM) and will be able to provide additional information in the FY18 annual update to the STP. 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~~Respondents ~~is~~are 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 off-site shipments during FY18~~6~~ 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[1] Waste

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

6.1.1 MLLW Additions

The~~ total~~ volume of MLLW requested for addition as "new covered" ~~is~~is ~~141.~~67.780 ~~442~~ m^3 ~~of new covered 10–100 nCi/g (LA-W935)~~(Table 6.1.1-1).

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

CP Section	MWIR[1] Waste ID	Treatability Group	Volume (m^3)
3.1.2~~3.3.4~~	LA-W904~~LA-W935~~	*Soil with Heavy Metals~~10–100 nCi/g~~*	~~36.779~~0.076
3.1.5~~3.3.4~~	LA-W921~~LA-W922~~	*Activated or Inseparable Lead~~10–100 nCi/g~~*	51.216 ~~104.663~~[2]
3.1.11	LA-W907	*Halogenated Organic Liquids*	0.208
3.3.4	LA-W935	*10–100 nCi/g Waste Triad*	7.253
3.3.4	LA-W935	*10–100 nCi/g Waste N3B*	9.027
		Total	67.780~~141.442~~

[1] MWIR is Mixed Waste Inventory Report.

~~*CP Section*~~	~~**MWIR [1] Waste ID**~~	~~**Treatability Group**~~	~~**Volume (m^3)**~~
~~*3.1.11*~~	~~LA-W907~~	~~Halogenated Organic Liquids~~	~~0.208~~
~~*3.1.2*~~	~~LA-W904~~	~~Soil with Heavy Metals~~	~~0.076~~
~~*3.1.5*~~	~~LA-W921~~	~~Activated or Inseparable Lead~~	~~51.216~~
~~*3.3.4*~~	~~LA-W935~~	~~10–100 nCi/g Waste~~	~~16.280~~
		~~***Total***~~	~~**67.780**~~

~~[2] Added as a result from reconciliation of discrepancies on sampling data form.~~

6.1.2 MTRU Waste Additions

The volume of new covered MTRU waste requested for addition is ~~515.011~~216.098 m^3 (Table 6.1.2-1). 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.

~~[1] Waste generated during the previous FY that was not shipped offsite within one year is termed new covered STP waste.~~

Table 6.1.2-1 Proposed Addition of ***New-Covered***[1] *MTRU Waste at TA-54, TA-55, CMR, and TWF*

~~CP Section~~	~~Treatability Group~~	~~Volume (m^3)~~
~~4.0~~	~~*Combustible-Noncombustible Waste*~~	~~1.872~~[2]
~~4.0~~	~~*Solidified Inorganic and Organic Waste*~~	~~379.841~~[2]
~~*Total TA-54 NewCovered Waste*~~		~~**381.719**~~
~~4.0~~	~~*Combustible-Noncombustible Waste at CMR*~~	~~4.164~~
~~4.0~~	~~*Combustible-Noncombustible Waste at CMR*~~	~~8.335~~[2]
~~4.0~~	~~*Combustible-Noncombustible Waste at TA-55*~~	~~94.181~~[2]
~~4.0~~	~~*Combustible Waste at TA-55*~~	~~9.596~~[2]
~~4.0~~	~~*Noncombustible Waste at TA-55*~~	~~17.015~~[2]
~~*Total CMR/TA-55 New Covered Waste*~~		~~**133.292**~~
~~*Total New Covered Waste*~~		~~**515.011**~~

CP Section	Treatability Group	Volume (m^3)
4.0	Combustible – Noncombustible Waste	~~62.480~~42.720
4.0	Noncombustible Waste	0.208
	Total TA-54 New Covered Waste	**~~62.688~~42.928**
4.0	CMR Combustible-Noncombustible Waste S5400	6.260
~~4.0~~	~~CMR Combustible – Noncombustible Organic Debris Waste~~	~~0.208~~
4.0	CMR Combustible – Noncombustible Organic Debris Waste S5300	0.208
4.0	TA-55 Combustible-Noncombustible Waste S5400	103.664
~~4.0~~	~~CMR Combustible-Noncombustible Waste~~	~~6.260~~
4.0	TA-55 Combustible Waste S5300	19.982
4.0	TA-55 Noncombustible Waste S3100	11.648
4.0	TA-55 Metallic Waste S5100	0.416
~~4.0~~	~~TA-55 Noncombustible Waste~~	~~11.648~~
~~4.0~~	~~TA-55 Combustible-Noncombustible Waste S5400~~	~~103.664~~
4.0	TA-55 Combustible-Noncombustible Waste S5900	0.208
4.0	TWF Combustible-Noncombustible Waste S5400	25.168
~~4.0~~	~~TA-55 Metallic Waste~~	~~0.416~~
~~4.0~~	~~TA-55 Noncombustible Waste~~	~~11.648~~
4.0	TWF Combustible Waste S5300	5.616
~~4.0~~	~~TWF Combustible-Noncombustible Waste~~	~~25.168~~
	Total CMR/TA-55/TWF New Covered Waste	**173.170**
	Total New Covered Waste	**~~235.858~~216.098**

[1] Waste generated during the previous FY that was not shipped off-site within one year is termed new covered STP waste.

~~[1] [2] New-covered waste in Table 6.1.2-1 refers to waste generated in the previous FY.~~

~~[2] [3] Added as a result of reconcilitation of discrepancies in inventory.~~

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

CP Section	Treatability Group	Volume (m^3)
4.0	*Combustible-Noncombustible Waste* (identification of potentially hazardous constituents based on investigation of characterization of TRU nitrate salt waste, debris containers with aerosol cans, and empty containers not meeting the RCRA empty criteria.)	0.00
4.0	*Solidified Inorganic and Organic Waste* (identification of potentially hazardous constituents based on investigation and characterization of TRU nitrate salt waste, cemented containers with free liquids, and empty containers not meeting the RCRA empty criteria.)	0.00
	Total Newly-Characterized MTRU	**0.00**

6.2 Deletion of Covered Waste

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

6.2.1 Deletion of MLLW

~~DOE/LANS~~Respondents ~~is~~are requesting that the covered MLLW identified in Appendix B be deleted from the STP. These covered waste were shipped off-site for treatment and disposal or recycling. The total volume of covered MLLW that is requested for deletion under this revision to the CP is ~~48.119~~58.753 m^3 (Appendix B, Table B-1).

6.2.2 Deletion of MTRU Waste

~~DOE/LANS~~Respondents ~~is~~are requesting that the covered MTRU waste identified in Appendix F be deleted from the STP. These covered wastes were shipped off-site ~~to~~ from WCS ~~and then~~ to WIPP for treatment and disposal ~~or recycling~~. The total volume covered MTRU that is requested for deletion from inventory under this revision to the CP is ~~62.444~~49.536 m^3 (Appendix F, Table F-1) ~~(Appendix F, Table F-2)~~. ~~No MTRU waste stored at LANL was shipped offsite for disposal at WIPP.~~

6.2.3 Other Deletions of FY18~~6~~ Waste

No waste is proposed for deletion due to recycling or on-site treatment in FY18~~7~~. No waste was shipped off-site for treatability studies.

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

~~DOE/LANS is~~Respondents are 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~~Respondents are 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~~Respondents are 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 FY18~~6~~, which was not treated within 12 months of generation, became new-covered waste during FY18~~7 (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

Decreases in covered waste inventory reflect the treatment and disposal or recycling of covered waste at off-site commercial facilities during ~~FY17~~FY18. Deletion of this covered waste is proposed to more accurately reflect the LANL STP inventory as of the end of FY18~~7.~~

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 FY18~~6~~.

8.0 ANTICIPATED LENGTH OF ANY DELAY IN PERFORMANCE

In accordance with FFCO Section X.C.2.c, ~~DOE/LANS~~Respondents 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 off-site were suspended in May 2014 due to the WIPP shutdown. ~~DOE/LANS~~Respondents resumed shipment of MTRU waste in ~~September 2017~~October 2018.~~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).

~~P~~PART III COMPLIANCE PLAN – PROPOSED REVISION 29~~8~~.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 off-site 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 on-site, 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

A.	Submit permit applications to 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 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 on-site, 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

Off-site 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 off-site for recycling are discussed under Part III, Section 2.6. All activities and compliance dates related to the construction, permitting, and operation of on-site treatment skids were removed from this document. This change was due to the increased availability of off-site treatment and disposal capacity for mixed waste. Respondents will continue evaluating new commercial and DOE off-site treatment facilities as potential options for managing mixed waste, as they become available.

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

Should ~~DOE~~ Respondents decide to treat or recycle waste at a commercial off-site facility (Table 2.3-1), ~~DOE~~ Respondents 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 Off-site 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 off-site 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 off-site 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 off-site for treatment/recycling at a noncommercial facility are identified in Table 2.3-2.

Table 2.3-2 Activities for Shipment Off-site 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 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.

2.3.1 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 cannot 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 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

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 an NMED permit application.

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~~ Respondents will notify NMED when off-site 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 off-site treatability study, ~~DOE~~ Respondents will evaluate the potential for incidental waste treatment or secondary waste generation, which are often associated with treatability studies.

2.6 Recycling/Re-Use

Respondents will pursue on-site or off-site 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 off-site 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~~ Respondents shall notify the NMED Project Manager in writing as soon as possible if mixed waste is planned to be sent to an off-site 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 off-site noncommercial recycling option prior to any shipment by ~~DOE~~Respondents. ~~DOE~~Respondents 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

A.	Meet all regulatory requirements for recycling/re-use.
B.	Provide documentation to NMED that waste has been received within 45 working days of receipt of waste at the recycling facility.

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 off-site for treatment. ~~DOE~~ Respondents 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~~Respondents will pursue on-site 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

A.	Meet all DOE requirements for radiological decontamination.
B.	Provide documentation to NMED that waste has been received within 45 working days of receipt of waste at the recycling facility; or
C.	Propose waste for deletion in accordance with Section IX of the FFCO.

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 Industrial Isopropyl Alcohol (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^3)
IPA Wastes	LA-W901	D001, D009, F002, F003, F005	0.00
Scintillation Fluids	LA-W902	D001, F003, F005	0.00
Totals			**0.00**

*MWIR is Mixed Waste Inventory Report

Treatment: The waste will be treated at an off-site 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^3)
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
Totals			**0.00**

*MWIR is Mixed Waste Inventory Report

Treatment: The waste will be treated at an off-site 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^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	0.00
Totals			**0.00**

*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^3)
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
Totals			**0.00**

*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^3)
Organic-Contaminated Combustible Solids	LA-W911	D001, D004, D008, D009, F001, F002, F003, F005	0.00
Totals			**0.00**

*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^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	0.00
Totals			**0.00**

*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^3)
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
Totals			**0.00**

*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^3)
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
Totals			**0.00**

*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^3)
Water-Reactive Metal	LA-W916	D001, D003, D004, D005, D007, D008, D010, D011	0.00
Totals			**0.00**

*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^3) (from Table A-1)
Compressed Gases Requiring Scrubbing	LA-W917 LA-W917-21 LA-W917-24 LA-W917-25 LA-W917-26 LA-W917-27 LA-W917-28 LA-W917-29	D001, D002, D003, D008, D009, P056	0.62~~45~~
Totals			**0.62~~45~~**

*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 off-site treatment facility or complete parallel option. A. ~~These containers must go through remediation; this process will be operational within the next year. To treat these containers, a permita permit modification to the HWFP is~~	September 30, 2021~~*~~

~~necessary. DOE Readiness activities will be conducted before operations begin.~~	
B. Provide documentation to NMED that waste was received at off-site 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^3)
Compressed Gases Requiring Oxidation	LA-W918	D001, U226	0.00
Totals			**0.00**

*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^3)
Elemental Mercury	LA-W920 LA-W920-16	D006, D009, F005	0.00
Totals			**0.00**

*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^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	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
Totals			**0.00**

*MWIR is Mixed Waste Inventory Report

Table 3.1.11-2 Additional Treatability Groups

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

*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^3)
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
Totals			**0.00**

*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^3)
Lead Wastes - TBD	LA-W924-15 LA-W924-16 LA-W924-17	D003, D008	0.00 0.00 0.00
Mercury Wastes – TBD	LA-W925-4 LA-W925-5 LA-W925-6 LA-W925-15 LA-W925-16 LA-W925-17 LA-W925-18	D003, D007, D008, D009 F001, F002, F005	0.00
Explosives	LA-W932	D003	0.00
Labpacks	LA-W933 LA-W933-17	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
High Activity Waste	LA-W934 LA-W934-16 LA-W934-19 LA-W934-20 LA-W934-24 LA-W934-27	D001, D003, D008, D009	1.477
Totals			**1.477**

*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 off-site treatment facility, or submit documentation assigning waste items to applicable treatability groups or complete parallel option.	September 29, ~~2019~~2020
B. Provide documentation to NMED that waste was received at off-site facility or provide notification of parallel option.	Within 45 days of receipt of waste at off-site 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 1.477 m^3.

On July 10, 2019, a letter (EPC-DO:19-226, -LA-UR-19-25967) was sent to NMED requesting an extension of compliance dates for Activity 3.2 (A) from September 29, 2019, to September 29, 2020. The notification for this request is ~~mentioned~~ noted in the FY18 STP Annual Report, ~~even~~ although the extension request occur~~s~~ed in FY19.The requested milestone extension is based on the proposed activities for the four flanged tritium waste containers (FTWCs) that are described in the "Temporary Authorization Request Waste Treatment, Storage, and Repackaging of Flanged Tritium Waste Containers," LA-UR-19-24513, submitted to NMED on June 18, 2019. The justification for the extension of Activity 3.2 – specifically LA-W934 High Activity Waste, is that the four FTWCs require treatment by venting, storage, sorting, segregation, and repackaging and these activities are currently in the final planning and scheduling phases. The fifth container of mercury and tritium contaminated cryotraps, originating from experimental activities at the Ion Beam Facility, ~~are~~is presently situated at TA-54, Area G. Due to the presence of elemental mercury, sorting and segregation as described in the technical area~~TA~~ is not appropriate for this waste. As this waste is also under the same compliance date of September 29, 2019, this container will require further discussion and planning toward options for a path forward, which has not been acted on to-date. Therefore, LANL will not meet the September 29, 2019, milestone for the remaining *High Activity Waste*.

As of August 14, 2019, NMED has reviewed the Extension Request dated July 8, 2019, and received July 10, 2019 (EPC-DO:19-226, LA-UR-19-25967), and has granted DOE and Triad the extension of a compliance plan milestone in the STP for *High Activity Waste* (LA-W934) from September 29, 2019, to September 29, 2020. This extension is DOE and Triad's second extension request for compliance dates for Activity 3.2(A) listed in the STP, FY17. The first was received by NMED June 28, 2018. If Triad is unable to meet the deadline, Triad must provide NMED with a status report on the path forward for the mercury and tritium contaminated cryotraps container.

A note from NMED within the above approval letter stated (HWB-LANL-19-040):

"Requests for extensions are typically included in the annual updates of STP and not as separate extension requests. In future, in accordance with Section X.B.2 of the Federal Facility Compliance Order (FFCO), the Respondents should request extensions during annual updates of the Site Treatment Plan, Fiscal Year Annual Update and Proposed Revisions."

~~Assuming that shipping issues can be resolved, LANL expects to meet theSeptember 29, 2019, milestone for the remaining *High Activity Waste*.~~

DOE/LANS continues to diligently pursue all possible options to ship the waste off-site prior to the milestone for the remaining five containers (tritium traps with mercury contamination and the molecular sieves and squib assemblies containing lead with very high tritium). The containers were originally planned for transport off-site to a commercial treatment facility using a 10-160B shipping cask, but this option has been determined not to be viable. Options for shipment and disposal of these waste items are being reassessed by a multidisciplinary team, with the first priority being to ensure continued stable, safe storage on-site in the meantime.

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 Net Volume (m^3)	Second Category Net Volume (m^3)	Totals Net Volume (m^3)
Lead For Surface Decontamination	LA-W930-0 LA-W930-5	0.00	0.00	0.00
Totals		**0.00**	**0.00**	**0.00**

*MWIR is Mixed Waste Inventory Report

Treatment: Any lead not acceptable for on-site or off-site lead decontamination, and any lead unsuccessfully decontaminated, will be designated in the following two categories: 1) for treatment and disposal at an off-site facility or 2) 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.

Table 3.3.1-2 Additional Wastes for Lead Decontamination

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

*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^3)
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
Totals		**0.00**

*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^3)
Nonradioactive or Suspect Waste Items	LA-W929-5	0.00
Totals		**0.00**

*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 (m3)
Lead Requiring Sorting	LA-W931	D008	0.00

Treatability Group	MWIR* Waste ID	RCRA Codes	Net Volume (m3)
Totals			**0.00**

*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^3)
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 LA-W935-27 LA-W935-28 LA-W935-29	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	~~172.527~~ ~~172.931~~202.8 229.390~~48~~
Totals			~~172.931~~202.8 229.390~~48~~17 ~~2.527~~

*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~~LLW population, and drums are relabeled appropriately~~. The drum is~~ and reclassified from TRU to MLLW in the database.

When a parent waste container is remediated, the waste contents are removed, WIPP waste acceptance criteria~~-~~ 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 were lifted in FY15, general movement of containers not related to safety or compliance remained restricted in FY17, therefore no treatment or processing was performed.~~

The MLLW drums are prepared for treatment and disposal to an off-site facility using LANL generator acceptable knowledge documentation and real-time radiography and non-destructive assay data. Restrictions imposed in 2015 for movements of LA-W935 waste at TA-54, Area G, were lifted in FY18. Past issues with the Area G Safety Basis were analyzed and corrected.

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

Activity	Compliance Dates
A. Complete radiological characterization.~~N3B is actively standing up the process to characterize and disposition these containers. As the containers are characterized and assayed, N3B will obtain a re-class from MTRU to MLLW. N3B will be submitting a permit modification request to the HWFP for the treatment process. DOE Readiness activities will be performed before starting operations.~~	September 30, 2022~~*~~
B. Complete shipment of existing waste to off-site facility for treatment, or complete parallel options.	September 30, 2022~~*~~
C. Provide documentation to NMED that waste was received at off-site 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.
~~*New proposed compliance date. Description/justification included in Part II, Section 5.0.~~	

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 repackage 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-empty, reclassified as MLLW.

The recharacterization process resumed in FY16 for waste to be accepted at off-site treatment and disposal facilities, and will continue to produce 10-100 nCi/g Waste (LA-W935). In 2018, N3B ~~has taken~~took over the operational responsibility of TA-54~~ and these facilities have not been operational for several years~~. ~~The start-up of operations includes~~Operational start-up included purchasing and installing treatment equipment and repairing existing deficiencies. ~~The facilities stand down~~were "stood down" ~~for several years was due to priority efforts~~ for manpower and funding to address the Remediated Nitrate Salt (RNS) drums and the Unremediated Nitrate Salt (UNS) drums.~~

3.4 Management of "Missing" Items

Table 3.4-1 Waste Category for "Missing Waste"

Category	MWIR* Waste ID	Container ID	Net Volume (m^3)
Missing/Nonexistent/To be verified (TBV)			0.000
Totals			**0.000**

*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 the items 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~~Respondents determine~~s~~ 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 this revision Annual Update.

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 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

Off-site 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/h~~e~~eld 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 - ~~(~~3706 ~~Non-cemented Above Ground EM Legacy TRU (MTRU) Waste)~~ ~~MTRU Waste~~ MTRU Waste Campaigne (remaining ~~original~~ containers at TA-54 and WCS on hold)~~)(~~ E~

~~Treatability Group~~	~~CP Section~~	~~FY14 Shipped (on hold)[1]~~	~~FY15 Total Volume (m^3)~~	~~FY16 Total, Volume (m^3)~~
~~Cemented Sludge~~	~~4.0~~	~~0.000~~	~~0.000~~	~~0.000~~
~~Combustible - Noncombustible Waste~~	~~4.0~~	~~30.736~~	~~32.938~~	~~68.362~~
~~Combustible Waste~~	~~4.0~~	~~0.000~~	~~0.208~~	~~0.208~~
~~Metallic Waste~~	~~4.0~~	~~0.208~~	~~0.000~~	~~0.208~~
~~Noncombustible Waste~~	~~4.0~~	~~1.040~~	~~0.208~~	~~1.248~~
~~Solidified Inorganic and Organic Waste~~	~~4.0~~	~~9.588~~	~~10.312~~	~~24.702~~
~~Total~~				

~~[1]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. This waste is a subset of the STP MTRU invento~~

MTRU Treatability Group	FY14 Shipped (On Hold)[1] (m^3)	FY15 in Inventory (Onsite) (m^3)	FY15-FY17 Removed from Inventory (Reclassified) (m^3)	FY17 Removed from Inventory (Shipped) (m^3)	FY18 Removed from Inventory (Shipped) (m^3)	FY18 Remaining in Inventory (m^3)
Cemented Sludge Waste	18.928	45.740	-0.644	-2.704	-6.032	**55.288**
Combustible-Noncombustible Waste	98.914	275.279	-5.474	-55.524	-36.526	**276.669**
Noncombustible Waste	0.832	0.738	0.000	0.000	-0.624	**0.946**
Solidified Inorganic Noncombustible Waste	9.380	10.958	0.000	0.000	-5.106	**15.232**

Solidified Inorganic Particulate Waste	23.296	93.296	-33.166	0.000	0.000	**83.426**
TOTALS	**151.350**	**426.011**	**-39.284**	**-58.228**	**-48.288**	**431.561**

[1]This waste was shipped off-site 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 this waste from the STP inventory is on hold until NMED approval has been reiceved. This waste is a subset of the STP MTRU inventory.

~~[2]MTRU volumes adjusted as a result of direct loaded standard waste boxes (SWBs). Volumes difference and treatability group changes are reflected in the Administrative Adjustments Table G-1. This waste is a subset of the STP MTRU inventory.~~

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 TWF, WCRRF, or WIPP	November 30, 2022
~~C.~~ B. Complete transfer of Metallic Waste (CVD) to CMR for material retrieval	October 31, 2020

Transfer of Covered MTRU Inventory: The ~~FY17~~ FY18 reported waste volume for STP-covered MTRU inventory is 1798.802m$^{~~at~~3}$ (Table 2.2-1)~~TA-55 and CMR is 63.14 m^3~~. ~~In~~ At the close of FY1~~6~~, approximately ~~9.57~~12.796 m^3 of the ~~63.14 m^3 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, at TA-55. A milestone extension ~~request~~ to October 31, 2020 was approved ~~,~~ for the removal of the remaining ~~five~~ four CVDs ~~is proposed~~ as ~~discussed in the CP Update Part II, Section 5.0~~shown in Table 4.0-2, B. The remaining CVD inventory at TA-55 is 6.398m^3.~~.~~

In FY18, t~~T~~he ~~remainder~~ remaining ~~361.101~~354.703 m^3 ~~53.57 m^3~~ of the covered MTRU waste inventory at TA-55, CMR, and TWF consists of ~~heterogeneous~~ combustible and noncombustible ~~mixed~~ waste (S5400), combustible-noncombustible organic debris waste (S5300), metallic waste (Non CVD) (S5100),and noncombustible waste (S3100), combustible – noncombustible waste (S5900). This MTRU inventory of waste will not be transferred to TA-54. It will be transported only to the Radioassay and Nondestructive Testing facility for shipment to WIPP.

The de-inventory of TA-55's MTRU waste will take multiple years. A milestone extension request to November 30, 2022, is proposed ~~as discussed in the CP Update Part II, Section 5.0~~as shown in Table 4.0-2, (A). A subset of the covered MTRU waste inventory will require management at the Waste Characterization, Reduction, and Repacking Facility (WCRRF) as the waste acceptance criteria for WIPP has changed since the waste was generated. WCRRF will not receive waste until it has implemented corrective actions as directed by the DOE's Accident Investigation Board, including updating its Safety Basis documents. DOE EM manages TA-54. DOE EM stated that TA-54 will not receive any programmatic newly-generated waste. The LANL Hazardous Waste Permit specifies that MTRU waste generated prior to April 21, 2011, cannot be stored at the TWF. In addition, WIPP is expected to receive a limited number of waste shipments per week. ~~DOE/LANS~~Respondents ~~is anticipated to be allowed one~~resumed shipment of MTRU waste ~~per week starting~~in ~~September 2017~~October 2018.

4.1 Management of "Missing" Items

Table 4.1-2 Waste Category for "Missing Waste"

Category	Treatability Groups	Net Volume (m^3)
Missing/Nonexistent/TBV	*Cemented Sludge*	0.00
	Combustible-Noncombustible Waste	0.000
	Combustible Waste	0.000
	Totals	**0.000**

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~~ Respondents determine~~s~~ 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.

APPENDICES

APPENDIX A CURRENT YEAR MLLW INVENTORY DETAIL

~~*Table A-1 FY17 MLLW Inventory Detailed Update by Treatability Group*~~

~~CP[1] Sec.~~	~~MWIR[1] Waste ID and Treatability Group/Category~~	~~FY16 Annual Update (m^3)[2]~~	~~Proposed Revision 28.0 (m^3)~~	~~Comments[3]~~	~~FY17 Annual Update (m^3)~~	~~Projection FY17 – FY21 (m^3)~~
~~3.1.1~~	~~LA-W901 *IPA Wastes*~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.1~~	~~LA-W902 *Scintillation Fluids*~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.2~~	~~LA-W903 *Lead Blankets*~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.2~~	~~LA-W904~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.2~~	~~*Soil with Heavy Metals* LA-W905 *ER Soils*~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.3~~	~~LA-W906 *Aqueous Organic Liquids*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.1.4~~	~~LA-W911 *Organic-Contaminated Combustible Solids*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.1.4~~	~~LA-W919 *Organic-Contaminated Noncombustible Solids*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.1.5~~	~~LA-W912 *Combustible Debris*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.1.5~~	~~LA-W921 *Activated or Inseparable Lead*~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.5~~	~~LA-W922 *Noncombustible Debris*~~	~~0~~	~~0~~	~~Administrative Adjustment~~	~~0~~	~~0~~
			~~0 Shipped offsite for treatment/disposal~~	~~0 New covered~~		
~~3.1.6~~	~~LA-W913 *Aqueous Wastes with Heavy Metals*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.1.6~~	~~LA-W914 *Corrosive Solutions*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.1.6~~	~~LA-W915 *Aqueous Cyanides, Nitrates, Chromates, and Arsenates*~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.7~~	~~LA-W916 *Water-Reactive Wastes*~~	~~0~~	~~0~~		~~0~~	~~0~~

~~CP[1] Sec.~~	~~MWIR[1] Waste ID and Treatability Group/Category~~	~~FY16 Annual Update (m^3)[2]~~	~~Proposed Revision 28.0 (m^3)~~	~~Comments[3]~~	~~FY17 Annual Update (m^3)~~	~~Projection FY17 – FY21 (m^3)~~
~~3.1.8~~	~~LA-W917[4]~~ ~~*Compressed Gases Requiring Scrubbing*~~	~~1.040~~	~~-0.415~~	~~Administrative Adjustment~~	~~0.625~~	~~0~~
			~~0~~	~~Shipped offsite for treatment/disposal~~		
~~3.1.9~~	~~LA-W918~~ ~~*Compressed Gases Requiring Oxidation*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.1.10~~	~~LA-W920~~ ~~*Elemental Mercury*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.1.11~~	~~LA-W907~~ ~~*Halogenated Organic Liquids*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.1.11~~	~~LA-W908~~ ~~*Nonhalogenated Organic Liquids*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.1.11~~	~~LA-W909~~ ~~*Bulk Oils*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.1.11~~	~~LA-W910~~ ~~*PCB Wastes with RCRA Components*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.1.11~~	~~LA-W923~~ ~~*Liquid and Solid Oxidizers*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.2~~	~~LA-W924~~ ~~*Lead Wastes – TBD*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.2~~	~~LA-W925~~ ~~*Mercury Wastes – TBD*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.2~~	~~LA-W926~~ ~~*Compressed Gases – TBD*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.2~~	~~LA-W927~~ ~~*Biochemical Laboratory Wastes*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.2~~	~~LA-W928~~ ~~*Dewatered Treatment Sludge*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.2~~	~~LA-W932~~ ~~*Explosives*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.2~~	~~LA-W933~~ ~~*Labpacks*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.2~~	~~LA-W934~~ ~~*High Activity Waste*~~	~~1.477~~	~~0~~	~~Shipped offsite for treatment/disposal~~	~~1.477~~	~~0~~
			~~0~~	~~Administrative Adjustment~~		
~~3.3.1~~	~~LA-W930~~ ~~*Lead for Surface Decontamination*~~	~~0~~	~~0~~		~~0~~	~~0~~

~~CP[1] Sec.~~	~~MWIR[1] Waste ID and Treatability Group/Category~~	~~FY16 Annual Update (m^3)[2]~~	~~Proposed Revision 28.0 (m^3)~~	~~Comments[3]~~	~~FY17 Annual Update (m^3)~~	~~Projection FY17 – FY21 (m^3)~~
~~3.3.2~~	~~LA-W929 *Nonradioactive or Suspect Waste Items to be Surveyed*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.3.3~~	~~LA-W931 *Lead Requiring Sorting*~~	~~0~~	~~0~~		~~0~~	~~0~~
~~3.3.4~~	~~LA-W935 *10–100 nCi/g Waste*~~	~~59.927~~	~~19.277~~	~~Administrative Adjustment~~		
			~~36.7795~~	~~New covered~~	~~170.426~~	~~50~~
			~~105.0781~~	~~Reconciled from WCATS inventory "New Covered"~~		
~~TOTALS~~		~~59.927~~		~~-~~	~~172.527~~	~~50~~

~~[1] CP is Compliance Plan; MWIR is Mixed Waste Inventory Report.~~
~~[2] MLLW volumes are calculated using the conversion: 55-gallon container = 0.208 m^3; 85-gallon container = 0.322 m^3.~~
~~[3] Shipment details are in Appendix B; Administrative adjustments are in Appendix C.~~

Table A-1 FY18 MLLW Inventory at TA-54 Detailed Update by Treatability Group

CP [1] Section	MWIR [1] Waste ID	Treatability Group/Category	FY17 Annual Update (m^3)	Proposed Revision 29.0 (m^3)	Comments	FY18 Annual Update (m^3) [2]	Projection FY19 - FY21 (m^3)
3.1.1	LA-W901	IPA Wastes	0	0	-	0	0
3.1.1	LA-W902	Scintillation Fluids	0	0	-	0	0
3.1.2	LA-W903	Lead Blankets	0	0	-	0	0
3.1.2	LA-W904	Soil with Heavy Metals	0	0	-	0	0
3.1.2	LA-W905	ER Soils	0	0	-	0	0
3.1.3	LA-W906	Aqueous Organic Liquids	0	0	-	0	0
3.1.4	LA-W911	Organic-Contaminated Combustible Solids	0	0		0	0
3.1.4	LA-W919	Organic-Contaminated Noncombustible Solids	0	0		0	0
3.1.5	LA-W912	Combustible Debris	0	0		0	0
3.1.5	LA-W921	Activated or Inseparable Lead	0	0		0	0
3.1.5	LA-W922	Noncombustible Debris	0	0		0	0
3.1.6	LA-W913	Aqueous Wastes with Heavy Metals	0	0		0	0
3.1.6	LA-W914	Corrosive Solutions	0	0		0	0
3.1.6	LA-W915	Aqueous Cyanides, Nitrates, Chromates, and Arsenates	0	0		0	0
3.1.7	LA-W916	Water-Reactive Wastes	0	0		0	0
3.1.8	LA-W917	Compressed Gases Requiring Scrubbing	0.625	-0.001	Administrative adjustment	0.624	0
				0	Shipped off-site for treatment/disposal		

CP [1] Section	MWIR [1] Waste ID	Treatability Group/Category	FY17 Annual Update (m^3)	Proposed Revision 29.0 (m^3)	Comments	FY18 Annual Update (m^3) [2]	Projection FY19 - FY21 (m^3)
3.1.9	LA-W918	Compressed Gases Requiring Oxidation	0	0		0	0
3.1.10	LA-W920	Elemental Mercury	0	0		0	0
3.1.11	LA-W907	Halogenated Organic Liquids	0	0		0	0
3.1.11	LA-W908	Nonhalogenated Organic Liquids	0	0		0	0
3.1.11	LA-W909	Bulk Oils	0	0		0	0
3.1.11	LA-W910	PCB Wastes with RCRA Components	0	0		0	0
3.1.11	LA-W923	Liquid and Solid Oxidizers	0	0		0	0
3.2	LA-W924	Lead Wastes – TBD	0	0		0	0
3.2	LA-W925	Mercury Wastes – TBD	0	0		0	0
3.2	LA-W926	Compressed Gases – TBD	0	0		0	0
3.2	LA-W927	Biochemical Laboratory Wastes	0	0		0	0

Table A-1 (continued)

CP [1] Section	MWIR [1] Waste ID	Treatability Group/Category	FY17 Annual Update (m^3)	Proposed Revision 29.0 (m^3)	Comments	FY18 Annual Update (m^3) [2]	Projection FY19 - FY21 (m^3)
3.2	LA-W928	Dewatered Treatment Sludge	0	0		0	0
3.2	LA-W932	Explosives	0	0		0	0
3.2	LA-W933	Labpacks	0	0		0	0
3.2	LA-W934	High Activity Waste *Note: The High Activity Waste composing of the FTWCs and cryotraps are located at TA-54, Area G but are managed by Triad.*	1.477	0	Administrative adjustment	1.477	0
				0	Shipped off-site for treatment/disposal		
3.3.1	LA-W930	Lead for Surface Decontamination	0	0		0	0
3.3.2	LA-W929	Nonradioactive or Suspect Waste Items to be Surveyed	0	0		0	0
3.3.3	LA-W931	Lead Requiring Sorting	0	0		0	0
3.3.4	LA-W935	10–100 nCi/g Waste	172.931	9.027	New covered	202.850	50
				20.892	Administrative adjustment		
				0	Shipped off-site for treatment/disposal		
Totals			**175.033**	**29.918**		**204.951**	**50**

~~CP [1] Section~~	~~MWIR [1] Waste ID~~	~~Treatability Group/Category~~	~~FY17 Annual Update (m^3) [2]~~	~~Proposed Revision 29.0 (m^3)~~	~~Comments [3]~~	~~FY18 Annual Update (m^3)~~	~~Projection FY19 - FY21 (m^3)~~

~~3.1.1~~	~~LA-W901~~	~~IPA Wastes~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.1~~	~~LA-W902~~	~~Scintillation Fluids~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.2~~	~~LA-W903~~	~~Lead Blankets~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.2~~	~~LA-W904~~	~~Soil with Heavy Metals~~	~~0~~	~~0.076~~	~~Triad New covered~~	~~0~~	~~0~~
				~~-0.076~~	~~Triad Shipped offsite for treatment/disposal~~		
~~3.1.2~~	~~LA-W905~~	~~ER Soils~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.3~~	~~LA-W906~~	~~Aqueous Organic Liquids~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.4~~	~~LA-W911~~	~~Organic-Contaminated Combustible Solids~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.4~~	~~LA-W919~~	~~Organic-Contaminated Noncombustible Solids~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.5~~	~~LA-W912~~	~~Combustible Debris~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.5~~	~~LA-W921~~	~~Activated or Inseparable Lead~~	~~0~~	~~51.216~~	~~Triad New covered~~	~~0~~	~~0~~
				~~-51.216~~	~~Triad Shipped offsite for treatment/disposal~~		
~~3.1.5~~	~~LA-W922~~	~~Noncombustible Debris~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.6~~	~~LA-W913~~	~~Aqueous Wastes with Heavy Metals~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.6~~	~~LA-W914~~	~~Corrosive Solutions~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.6~~	~~LA-W915~~	~~Aqueous Cyanides, Nitrates, Chromates, and Arsenates~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.7~~	~~LA-W916~~	~~Water-Reactive Wastes~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.8~~	~~LA-W917~~	~~Compressed Gases Requiring Scrubbing~~	~~0.625~~	~~-0.001~~	~~N3B Administrative adjustment~~	~~0.624~~	~~0~~
				~~0~~	~~N3B Shipped offsite for treatment/disposal~~		
~~3.1.9~~	~~LA-W918~~	~~Compressed Gases Requiring Oxidation~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.10~~	~~LA-W920~~	~~Elemental Mercury~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.11~~	~~LA-W907~~	~~Halogenated Organic Liquids~~	~~0~~	~~0.208~~	~~Triad New covered~~	~~0~~	~~0~~
				~~-0.208~~	~~Triad Shipped offsite for treatment/disposal~~		
~~3.1.11~~	~~LA-W908~~	~~Nonhalogenated Organic Liquids~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.11~~	~~LA-W909~~	~~Bulk Oils~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.11~~	~~LA-W910~~	~~PCB Wastes with RCRA Components~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.1.11~~	~~LA-W923~~	~~Liquid and Solid Oxidizers~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.2~~	~~LA-W924~~	~~Lead Wastes – TBD~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.2~~	~~LA-W925~~	~~Mercury Wastes – TBD~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~

~~3.2~~	~~LA-W926~~	~~Compressed Gases – TBD~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.2~~	~~LA-W927~~	~~Biochemical Laboratory Wastes~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.2~~	~~LA-W928~~	~~Dewatered Treatment Sludge~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.2~~	~~LA-W932~~	~~Explosives~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.2~~	~~LA-W933~~	~~Labpacks~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.2~~	~~LA-W934~~	~~High-Activity Waste~~	~~1.477~~	~~0~~	~~N3B Administrative adjustment~~	~~1.477~~	~~0~~
				~~0~~	~~N3B Shipped offsite for treatment/disposal~~		
~~3.3.1~~	~~LA-W930~~	~~Lead for Surface Decontamination~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.3.2~~	~~LA-W929~~	~~Nonradioactive or Suspect Waste Items to be Surveyed~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.3.3~~	~~LA-W931~~	~~Lead Requiring Sorting~~	~~0~~	~~0~~	~~-~~	~~0~~	~~0~~
~~3.3.4~~	~~LA-W935~~	~~10–100 nCi/g Waste~~	~~172.931~~	~~9.027~~	~~N3B New covered~~	~~202.848~~	~~50~~
				~~20.890~~	~~N3B Administrative adjustment~~		
				~~0~~	~~N3B Shipped offsite for treatment/disposal~~		
				~~7.253~~	~~Triad New covered~~		
				~~0~~	~~Triad Administrative adjustment~~		
				~~7.253~~	~~Triad Shipped offsite for treatment/disposal~~		
~~**Totals**~~			~~**175.03**~~	~~**29.916**~~	~~-~~	~~**204.949**~~	~~**50**~~

[1] CP is Compliance Plan; MWIR is Mixed Waste Inventory Report.
[2] Values were rounded to 3 significant figures after the decimal point.

Table A-2 FY18 MLLW Inventory at CMR, TA-55, and TWF Detailed Update by Treatability Group

CP [1] Section	MWIR [1] Waste ID	Treatability Group/Category	FY17 Annual Update (m^3) [2]	Proposed Revision 29.0 (m^3)	Comments	FY18 Annual Update (m^3)[2]	Projection FY19 - FY21 (m^3)
3.1.1	LA-W901	IPA Wastes	0	0		0	0
3.1.1	LA-W902	Scintillation Fluids	0	0		0	0
3.1.2	LA-W903	Lead Blankets	0	0		0	0
3.1.2	LA-W904	Soil with Heavy Metals	0	0.076	New covered	0	0
				-0.076	Shipped off-site for treatment/disposal		
3.1.2	LA-W905	ER Soils	0	0		0	0
3.1.3	LA-W906	Aqueous Organic Liquids	0	0		0	0
3.1.4	LA-W911	Organic-Contaminated Combustible Solids	0	0		0	0
3.1.4	LA-W919	Organic-Contaminated Noncombustible Solids	0	0		0	0
3.1.5	LA-W912	Combustible Debris	0	0		0	0
3.1.5	LA-W921	Activated or Inseparable Lead	0	51.216	New covered	0	0
				-51.216	Shipped off-site for treatment/disposal		
3.1.5	LA-W922	Noncombustible Debris	0	0		0	0
3.1.6	LA-W913	Aqueous Wastes with Heavy Metals	0	0		0	0
3.1.6	LA-W914	Corrosive Solutions	0	0		0	0
3.1.6	LA-W915	Aqueous Cyanides, Nitrates, Chromates, and Arsenates	0	0		0	0
3.1.7	LA-W916	Water-Reactive Wastes	0	0		0	0
3.1.8	LA-W917	Compressed Gases Requiring Scrubbing	0	0		0	0
3.1.9	LA-W918	Compressed Gases Requiring Oxidation	0	0		0	0
3.1.10	LA-W920	Elemental Mercury	0	0		0	0
3.1.11	LA-W907	Halogenated Organic Liquids	0	0.208	New covered	0	0
				-0.208	Shipped off-site for treatment/disposal		
3.1.11	LA-W908	Nonhalogenated Organic Liquids	0	0		0	0
3.1.11	LA-W909	Bulk Oils	0	0		0	0
3.1.11	LA-W910	PCB Wastes with RCRA Components	0	0		0	0
3.1.11	LA-W923	Liquid and Solid Oxidizers	0	0		0	0
3.2	LA-W924	Lead Wastes – TBD	0	0		0	0
3.2	LA-W925	Mercury Wastes – TBD	0	0		0	0
3.2	LA-W926	Compressed Gases – TBD	0	0		0	0

Table A-2 (continued)

CP [1] Section	MWIR [1] Waste ID	Treatability Group/Category	FY17 Annual Update (m^3) [2]	Proposed Revision 29.0 (m^3)	Comments	FY18 Annual Update (m^3)[2]	Projection FY19 - FY21 (m^3)
3.2	LA-W927	Biochemical Laboratory Wastes	0	0		0	0
3.2	LA-W928	Dewatered Treatment Sludge	0	0		0	0
3.2	LA-W932	Explosives	0	0		0	0
3.2	LA-W933	Labpacks	0	0		0	0
3.2	LA-W934	High Activity Waste	0	0		0	0
3.3.1	LA-W930	Lead for Surface Decontamination	0	0		0	0
3.3.2	LA-W929	Nonradioactive or Suspect Waste Items to be Surveyed	0	0		0	0
3.3.3	LA-W931	Lead Requiring Sorting	0	0		0	0
3.3.4	LA-W935	10–100 nCi/g Waste	0.000	7.253	New covered	26.540	50
				26.540	Administrative adjustment		
				-7.253	Shipped off-site for treatment/disposal		
Totals			**0**	**26.540**		**26.540**	**50**

[1] CP is Compliance Plan; MWIR is Mixed Waste Inventory Report.
[2] Values were rounded to 3 significant figures after the decimal point.

~~[4] 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 ~~APPENDIX~~B CURRENT YEAR MLLW SHIPMENT DETAIL

Table B-1 LANL MLLW Shipped Off-site for Treatment and Disposal in FY18~~7~~

CP Section	MWIR* No.	Treatability Group	Manifest Number	Destination	Date Shipped	Total Volume (m^3)
~~3.3.4~~	~~LA-W935~~	~~*10-100 nCi/g Waste*~~	~~006647301FLE~~	~~PermaFix NW~~	~~03/7/2017~~	~~11.334~~
~~3.3.4~~	~~LA-W935~~	~~*10-100 nCi/g Waste*~~	~~006641098FLE~~	~~Waste Control Solutions~~	~~5/23/2017~~	~~0.208~~
~~3.3.4~~	~~LA-W935~~	~~*10-100 nCi/g Waste*~~	~~006649771FLE~~	~~Energy Solutions~~	~~9/13/2017~~	~~0.3215~~
~~3.3.4~~	~~LA-W935~~	~~*10-100 nCi/g Waste*~~	~~006649706FLE~~	~~Energy Solutions~~	~~8/17/2017~~	~~36.250~~
3.1.5	LA-W921	*Activated or Inseparable Lead*	106063/ 006650098FLE	Energy Solutions	04/11/18	50.970
3.1.5	LA-W921	*Activated or Inseparable Lead*	105654/ 006650042FLE	WCS	03/22/18	0.246
3.1.11	LA-W907	*Halogenated Organic Liquids*	106443/ 006650715FLE	Perma Fix Fl	07/16/18	0.208
3.1.2	LA-W904	*Soil with Heavy Metals*	106590/ 006650772FLE	Perma Fix Fl	08/27/18	0.076
3.3.4	LA-W935	*10 - 100nCi/g Waste*	105654/ 006650042FLE	WCS	3/22/18	0.832
3.3.4	LA-W935	*10 - 100nCi/g Waste*	105582/ 00647353FLE	WCS	3/19/18	6.421
			~~48.119~~			
					~~48.119~~TOTAL~~58.753~~	58.753

* MWIR is Mixed Waste Inventory Report.
Note: Values were rounded to 3 significant figures after the decimal point.

~~Avril, please double check this table. There is one shipment going to two different destinations~~

APPENDIX C CURRENT YEAR MLLW ADMINISTRATIVE ADJUSTMENTS

Table C-1 Administrative Adjustments

~~CP Section~~	~~MWIR* Number~~	~~Administrative Adjustment~~	~~Volume (m^3)~~
~~3.3.4~~	~~LA-W935~~	~~Transferred into LA-W935 from reclassification of Empty containers (see section 3.4 for details)~~	~~21.541~~
		~~Transferred into LA-W935 from reclassification of TRU and MTRU-STP-covered waste~~	~~0.208~~
		~~Transferred into LA-W935 from reclassification of MTRU-STP covered waste. Due to an administrative recordkeeping error, this MLLW container was inadvertently disposed in Pit 38 at Area G. Notification was sent to the NMED (ADESH-16-21) on February 25, 2016. Future discussions with the NMED are pending.~~	~~-2.056~~
		~~**Total Net Adjustments for LA-W935**~~	~~**19.693**~~
~~3.1.8~~	~~LA-W917~~	~~Reconciled from FY16 inventory. Transferred into LA-W935 from reclassification of Compressed Gases.~~	~~-0.415~~
		~~**Total Net Adjustments for LA-W917**~~	~~**-0.415**~~
		~~**Total Net Adjustments**~~	~~**19.278**~~

~~*MWIR is Mixed Waste Inventory Repo~~

CP Section	MWIR* Number	Administrative Adjustment	Volume (m3)
3.1.8	LA-W917	N3B Administrative adjustment	-0.001
3.3.4	LA-W935	N3B Administrative adjustment	20.892
3.3.4	LA-W935	LANS Administrative adjustment	26.540
		Total Net Adjustments	**47.431**

*MWIR is Mixed Waste Inventory Report
Note: Values were rounded to 3 significant figures after the decimal point.

Table C-2 Administrative Adjustment – Detail

~~CP Section~~	~~MWIR*~~	~~Treatability Group~~	~~Type of Adjustment~~	~~Cumulative Volume Adjustment (m^3)~~	~~Item or Container Number~~	~~MLLW Container Volume (m^3)~~	~~Reason for Administrative Adjustment~~
~~3.1.8~~	~~LA-W917~~	~~Total Compressed Gas~~	~~Reconciled from WCATS inventory~~	~~-0.415~~			~~Removed as a result of reconciling data.~~
~~3.3.4~~	~~LA-W935~~	~~10-100 nCi/g~~	~~Reclassified/Repackaged MTRU STP and TRU inventory to MLLW STP inventory~~	~~21.545~~			~~Removed as a result of reconciliation WCATS inventory~~
					~~W797736~~	~~0.322~~	
					~~W798796~~	~~0.322~~	
					~~W730974~~	~~0.322~~	
					~~W799407~~	~~0.322~~	
					~~W799536~~	~~0.322~~	
					~~W799424~~	~~0.322~~	
					~~W799727~~	~~0.322~~	
					~~W799724~~	~~0.322~~	
					~~W799772~~	~~0.322~~	
					~~W799735~~	~~0.322~~	
					~~W799775~~	~~0.322~~	
					~~W799924~~	~~0.322~~	
					~~W799028~~	~~0.322~~	
					~~W800053~~	~~0.322~~	
					~~W800386~~	~~0.322~~	
					~~W800389~~	~~0.322~~	
					~~W801043~~	~~0.322~~	
					~~W789230~~	~~0.322~~	
					~~W788964~~	~~0.322~~	
					~~W789282~~	~~0.322~~	
					~~W788786~~	~~0.322~~	
					~~W789845~~	~~0.322~~	

~~CP Section~~	~~MWIR*~~	~~Treatability Group~~	~~Type of Adjustment~~	~~Cumulative Volume Adjustment (m^3)~~	~~Item or Container Number~~	~~MLLW Container Volume (m^3)~~	~~Reason for Administrative Adjustment~~
					~~W788896~~	~~0.322~~	
					~~W789998~~	~~0.322~~	
					~~W789894~~	~~0.322~~	
					~~W791568~~	~~0.322~~	
					~~W791483~~	~~0.322~~	
					~~W791487~~	~~0.322~~	
					~~W790098~~	~~0.322~~	
					~~W789528~~	~~0.322~~	
					~~W790231~~	~~0.322~~	
					~~W790101~~	~~0.322~~	
					~~W790103~~	~~0.322~~	
					~~W790105~~	~~0.322~~	
					~~W790107~~	~~0.322~~	
					~~W790109~~	~~0.322~~	
					~~W790151~~	~~0.322~~	
					~~W790134~~	~~0.322~~	
					~~W788762~~	~~0.322~~	
					~~W788764~~	~~0.322~~	
					~~W788766~~	~~0.322~~	
					~~W788768~~	~~0.322~~	
					~~W791583~~	~~0.322~~	
					~~W791585~~	~~0.322~~	
					~~W791587~~	~~0.322~~	
					~~W790059~~	~~0.322~~	
					~~W790061~~	~~0.322~~	
					~~W790063~~	~~0.322~~	
					~~W790065~~	~~0.322~~	
					~~W790148~~	~~0.322~~	
					~~W790150~~	~~0.322~~	

~~CP Section~~	~~MWIR*~~	~~Treatability Group~~	~~Type of Adjustment~~	~~Cumulative Volume Adjustment (m^3)~~	~~Item or Container Number~~	~~MLLW Container Volume (m^3)~~	~~Reason for Administrative Adjustment~~
					~~W790232~~	~~0.322~~	
					~~W791317~~	~~0.322~~	
					~~W791382~~	~~0.322~~	
					~~W788174~~	~~0.322~~	
					~~W788176~~	~~0.322~~	
					~~W788178~~	~~0.322~~	
					~~W788180~~	~~0.322~~	
					~~W788182~~	~~0.322~~	
					~~W791634~~	~~0.322~~	
					~~W791636~~	~~0.322~~	
					~~W791710~~	~~0.322~~	
					~~W791712~~	~~0.322~~	
					~~W788643~~	~~0.322~~	
					~~W788647~~	~~0.322~~	
					~~W789360~~	~~0.322~~	
					~~W791755~~	~~0.322~~	
~~21.545~~							
~~-0.415~~							

~~*MWIR is Mixed Waste Inventory Report~~

CP Section	MWIR*	Treatability Group	Type of Adjustment	Cumulative Volume Adjustment (m^3)	Item or Container Number	MLLW Container Volume (m^3)	Reason for Administrative Adjustment
3.1.8	LA-W917	Compressed Gases Requiring Scrubbing	N3B Consolidation	-0.001			
					W801216	-0.001	Removal of one aerosol container that was consolidated into a 55-gallon drum (W728258) during FY2014.
LA-W917 Compressed Gases Requiring Scrubbing Net Adjustment						**-0.001**	

3.3.4	LA-W935	10–100 nCi/g Waste	LANS Reconciled with WCATS inventory	26.540			
					W843068	13.564	Container was omitted from the last update.
					W844030	12.976	Container was omitted from the last update.
3.3.4	LA-W935	10–100 nCi/g Waste	N3B Reconciled with WCATS inventory	20.892			
					L11225132	0.208	Container was omitted from the last update.
					L12225850	0.416	Container was omitted from the last update.
					L12225867	0.416	Container was omitted from the last update.
					L12225868	0.416	Container was omitted from the last update.
					L12225869	0.416	Container was omitted from the last update.
					L12225870	0.416	Container was omitted from the last update.
					L12225872	0.416	Container was omitted from the last update.
					W729569	0.208	Container was omitted from the last update.
					W787713	0.322	Container was omitted from the last update.
					W788372	0.322	Container was omitted from the last update.
					W789577	0.322	Container was omitted from the last update.
					W789641	0.322	Container was omitted from the last update.

Table C-2 (continued)

CP Section	MWIR*	Treatability Group	Type of Adjustment	Cumulative Volume Adjustment (m^3)	Item or Container Number		
					W789721	0.322	Container was omitted from the last update.
					W789828	0.322	Container was omitted from the last update.
					W790411	0.322	Container was omitted from the last update.

Table C-2 (continued)

CP Section	MWIR*	Treatability Group	Type of Adjustment	Cumulative Volume Adjustment (m^3)	Item or Container Number		
					W790432	0.322	Container was omitted from the last update.
					W791378	0.322	Container was omitted from the last update.
					W796386	1.9	Container was omitted from the last update.
					W798072	0.322	Container was omitted from the last update.
					W798190	0.322	Container was omitted from the last update.
					W798315	0.322	Container was omitted from the last update.
					W798458	0.322	Container was omitted from the last update.
					W798459	0.322	Container was omitted from the last update.
					W798475	0.322	Container was omitted from the last update.
					W798491	0.322	Container was omitted from the last update.
					W798555	0.322	Container was omitted from the last update.
					W798623	0.322	Container was omitted from the last update.
					W798643	0.322	Container was omitted from the last update.
					W799454	0.322	Container was omitted from the last update.
					W799475	0.322	Container was omitted from the last update.
					W800230	0.322	Container was omitted from the last update.
					W800232	0.322	Container was omitted from the last update.
					W800469	0.322	Container was omitted from the last update.
					W800493	0.322	Container was omitted from the last update.
					W800494	0.322	Container was omitted from the last update.
					W800563	0.322	Container was omitted from the last update.

Table C-2 (continued)

CP Section	MWIR*	Treatability Group	Type of Adjustment	Cumulative Volume Adjustment (m^3)	Item or Container Number		
					W800585	0.322	Container was omitted from the last update.
					W800586	0.322	Container was omitted from the last update.
					W800632	0.322	Container was omitted from the last update.
					W800646	0.322	Container was omitted from the last update.
					W800660	0.322	Container was omitted from the last update.
					W800736	0.322	Container was omitted from the last update.
					W800990	0.322	Container was omitted from the last update.
					W801026	0.322	Container was omitted from the last update.
					W801448	0.208	Container was omitted from the last update.
					W801534	0.208	Container was omitted from the last update.
					W801647	0.322	Container was omitted from the last update.
					W801664	0.322	Container was omitted from the last update.
					W801852	0.322	Container was omitted from the last update.
					W801926	0.208	Container was omitted from the last update.
					W801965	0.322	Container was omitted from the last update.
					W802127	0.208	Container was omitted from the last update.
					W802130	0.208	Container was omitted from the last update.
					W802173	0.322	Container was omitted from the last update.
					W802339	0.322	Container was omitted from the last update.
					W802363	0.322	Container was omitted from the last update.
					W819937	0.322	Container was omitted from the last update.

Table C-2 (continued)

CP Section	MWIR*	Treatability Group	Type of Adjustment	Cumulative Volume Adjustment (m^3)	Item or Container Number		
					W820020	0.322	Container was omitted from the last update.
					W822501	0.208	Container was omitted from the last update.
					W823826	0.322	Container was omitted from the last update.
					W823827	0.322	Container was omitted from the last update.
						0.020	Variance is due to not rounding volumes in the last update to 3 significant figures before performing calculations.
N3B LA-W935 10–100 nCi/g Waste Net Adjustment						**20.892**	
LANS LA-W935 10–100 nCi/g Waste Net Adjustment						**26.540**	
Total MLLW Adjustment						**47.431**	

*MWIR is Mixed Waste Inventory Report
Note: Values were rounded to 3 significant figures after the decimal point.

APPENDIX D PREVIOUS YEAR MLLW INVENTORY DETAIL

Table D-1 ~~FY16~~ FY17 MLLW Inventory Detailed Update by Treatability Group

CP[1] Sec.	MWIR[2] Waste ID and Treatability Group/Category	FY16~~5~~ Annual Update (m^3)[3]	Proposed Revision 28~~6~~.0 (m^3)	Comments[4]	FY17~~6~~ Annual Update (m^3)	Projection FY17~~7~~ – FY21~~20~~ (m^3)
3.1.1	LA-W901 *IPA Wastes*	0	0		0	0
3.1.1	LA-W902 *Scintillation Fluids*	0	0		0	0
3.1.2	LA-W903 *Lead Blankets*	0	0		0	0
3.1.2	LA-W904 *Soil with Heavy Metals*	0	0		0	0
3.1.2	LA-W905 *ER Soils*	0	0		0	0
3.1.3	LA-W906 *Aqueous Organic Liquids*	0	0		0	0
3.1.4	LA-W911 *Organic-Contaminated Combustible Solids*	0	0		0	0
3.1.4	LA-W919 *Organic-Contaminated Noncombustible Solids*	0	0		0	0
3.1.5	LA-W912 *Combustible Debris*	0	0		0	0
3.1.5	LA-W921 *Activated or Inseparable Lead*	0	0		0	0
3.1.5	LA-W922 *Noncombustible Debris*	0	~~2.625~~	Administrative Adjustment	0	0
			2.6250	Shipped off-site for treatment/disposal		
3.1.6	LA-W913 *Aqueous Wastes with Heavy Metals*	0	0		0	0
3.1.6	LA-W914 *Corrosive Solutions*	0	0		0	0
3.1.6	LA-W915 *Aqueous Cyanides, Nitrates, Chromates, and Arsenates*	0	0		0	0

Table D-1 (continued)

CP[1] Sec.	MWIR[2] Waste ID and Treatability Group/Category	FY16~~5~~ Annual Update (m^3) [3]	Proposed Revision 28~~6~~.0 (m^3)	Comments[4]	FY17~~6~~ Annual Update (m^3)	Projection FY17~~7~~ – FY21~~20~~ (m^3)
3.1.7	LA-W916 *Water-Reactive Wastes*	0	0		0	0
3.1.8	LA-~~W917[5]~~W917[4] *Compressed Gases Requiring Scrubbing*	~~1.248~~1.040	~~0.208~~ 0.415	Administrative Adjustment	~~1.040~~0.625	0
			0	Shipped off-site for treatment/disposal		
3.1.9	LA-W918 *Compressed Gases Requiring Oxidation*	0	0		0	0
3.1.10	LA-W920 *Elemental Mercury*	0	0		0	0
3.1.11	LA-W907 *Halogenated Organic Liquids*	0	0		0	0
3.1.11	LA-W908 *Nonhalogenated Organic Liquids*	0	0		0	0
3.1.11	LA-W909 *Bulk Oils*	0	0		0	0
3.1.11	LA-W910 *PCB Wastes with RCRA Components*	0	0		0	0
3.1.11	LA-W923 *Liquid and Solid Oxidizers*	0	0		0	0
3.2	LA-W924 *Lead Wastes – TBD*	0	0		0	0
3.2	LA-W925 *Mercury Wastes – TBD*	0	0		0	0
3.2	LA-W926 *Compressed Gases – TBD*	0	0		0	0
3.2	LA-W927 *Biochemical Laboratory Wastes*	0	0		0	0
3.2	LA-W928 *Dewatered Treatment Sludge*	0	0		0	0

Table D-1 (continued)

CP[1] Sec.	MWIR[2] Waste ID and Treatability Group/Category	FY16~~5~~ Annual Update (m^3) [3]	Proposed Revision 28~~6~~.0 (m^3)	Comments[4]	FY17~~6~~ Annual Update (m^3)	Projection FY17~~7~~ – FY21~~20~~ (m^3)
3.2	LA-W932 *Explosives*	0	0		0	0
3.2	LA-W933 *Labpacks*	0	0		0	0
3.2	LA-W934 *High Activity Waste*	1.477 ~~1.477~~	0	Shipped off-site for treatment/disposal	1.477	0
			~~0.176~~	~~Administrative Adjustment~~		
3.3.1	LA-W930 *Lead for Surface Decontamination*	0	0		0	0
3.3.2	LA-W929 *Nonradioactive or Suspect Waste Items to be Surveyed*	0	0		0	0
3.3.3	LA-W931 *Lead Requiring Sorting*	0	0		0	0
`3.3.4	LA-W935 *10–100 nCi/g Waste*	~~33.140~~57.410	~~43.506~~21.782	Administrative Adjustment	172.931~~57.410~~	50
			36.780~~0~~	New covered		
			105.078~~-19.236~~	~~Shipped offsite for treatment/disposal~~Reconciled from WCATS inventory "New Covered"		
			-48.119	Shipped off-site for treatment/disposal		
TOTALS		**~~35.689~~59.927**			**175.033~~59.927~~**	50

[1] CP is Compliance Plan.
[2] MWIR is Mixed Waste Inventory Report.
[3] MLLW volumes are calculated using the conversion: 55-gallon container = 0.208 m^3; 85-gallon container = 0.322 m^3.
[4] Shipment details are in Appendix B; Administrative adjustments are in Appendix C.
Note: Values were rounded to 3 significant figures after the decimal point[5] ~~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 E CURRENT MTRU INVENTORY DETAIL

Table E-1 TA-54 MTRU Covered Inventory (by Treatability Group)

~~Treatability Group~~	~~FY16 Annual Update (m^3)~~	~~Proposed Revision 28.0 (m^3)~~[1,2]	~~Comments~~[3]	~~FY17 Annual Update (m^3)~~	~~Projection FY18–FY21 (m^3)~~
~~*Cemented Sludge*~~	~~82.250~~				
		~~(0)~~[4]	~~3706 Non-cemented Above-ground EM Legacy TRU (MTRU waste only)~~		
		~~0~~	~~New Covered~~		
		~~(0)~~	~~FY14 Shipped Offsite on Hold~~[5]		
		~~0~~	~~Shipped to WIPP (placed below grade)~~		
		~~-82.250~~	~~Administrative Adjustments~~		
			~~**FY17 Subtotal *Cemented Sludge***~~	~~**0**~~	~~0~~
~~*Combustible – Noncombustible Waste*~~	~~349.792~~				
		~~(68.362)~~[4]	~~3706 Non-cemented Above-ground EM Legacy TRU (MTRU waste only)~~		
		~~1.878~~	~~New Covered~~		
		~~(-153.204)~~	~~FY14 Shipped Offsite on Hold~~[5]		
		~~0~~	~~Shipped to WIPP (placed below grade)~~		
		~~-186.503~~	~~Administrative Adjustments~~		
			~~**FY17 Subtotal *Combustible Noncombustible Waste***~~	~~**165.167**~~	~~100~~
~~*Combustible Waste*~~	~~1.154~~				
		~~(0.208)~~[4]	~~3706 Non-cemented Above-ground EM Legacy TRU (MTRU waste only)~~		
		~~0~~	~~New Covered~~		
		~~(0)~~	~~FY14 Shipped Offsite on Hold~~[5]		
		~~0~~	~~Shipped to WIPP (placed below grade)~~		
		~~-1.154~~	~~Administrative Adjustments~~		
			~~**FY17 Subtotal *Combustible Waste***~~	~~**0**~~	~~0~~
~~*Glass Waste*~~	~~0~~				
		~~(0)~~[4]	~~3706 Non-cemented Above-ground EM Legacy TRU (MTRU waste only)~~		
		~~0~~	~~New Covered~~		
		~~0~~	~~Shipped Offsite~~		
		~~0~~	~~Administrative Adjustments~~		
			~~**FY17 Subtotal *Glass Waste***~~	~~**0**~~	~~0~~

Treatability Group	FY16 Annual Update (m^3)	Proposed Revision 28.0 (m^3)[1,2]	Comments[3]	FY17 Annual Update (m^3)	Projection FY18–FY21 (m^3)
Leaded Glovebox Waste	0				
		(0)[4]	3706 Non-cemented Above-ground EM Legacy TRU (MTRU waste only)		
		0	New Covered		
		0	Shipped Offsite		
		0	Administrative Adjustments		
			FY17 Subtotal *Leaded Glovebox Waste*	0	0
Metallic Waste (Non-CVD)	2.309				
		(0.208)[4]	3706 Non-cemented Above-ground EM Legacy TRU (MTRU waste only)		
		0	New Covered		
		(0.208)	FY14 Shipped Offsite on Hold[5]		
		-2.101	Administrative Adjustments		
			FY16 Subtotal *Metallic Waste*	0.208	0
Noncombustible Waste	22.108				
		(1.248)[4]	3706 Non-cemented Above-ground EM Legacy TRU (MTRU waste only)		
		0	New Covered		
		(14.050)	FY14 Shipped Offsite on Hold[5]		
		0	Shipped to WIPP (placed below grade)		
		-22.108	Administrative Adjustments		
			FY17 Subtotal *Noncombustible Waste*	0	100
Solidified Inorganic and Organic Waste	434.204	379.841	Reconciled from WCATS inventory and included as newly covered		
		(24.702)[4]	3706 Non-cemented Above-ground EM Legacy TRU (MTRU waste only)		
		(20.196)	FY14 Shipped Offsite on Hold[5]		
		0	Shipped to WIPP (placed below grade)		
		292.727	Administrative Adjustments		
			FY17 Subtotal *Solidified Inorganic and Organic Waste*	1106.769	10
TOTAL FY16:	891.817		Total FY17 Inventory:	1272.144	210

[1] MTRU waste volumes are calculated using the conversion: 55-gallon container = 0.208 m^3; 85-gallon container = 0.322 m^3.

[2] Volumes are represented to three decimal places.

[3] Shipping details are found in Appendix F and Administrative Adjustments are found in Appendix G.

[4] Amount already included in the MTRU STP covered inventory.

[5] NMED has determined that the removal of MTRU from the STP will be deferred until more information becomes available and is the final disposition of the waste currently stored at the offsite facility is determined. Amount already included in the MTRU STP covered inventory.

Treatability Group	FY17 Annual Update (m^3)	Proposed Revision 29.0 (m^3) [1] [2]	Comments [3]	FY18 Annual Update (m^3)	Projection FY19 – FY21 (m^3)
Cemented Sludge Waste	0	55.288	3706 Above-ground EM Legacy TRU (MTRU waste only) [4]	500.420	0
		11.856	FY14 Shipped Off-site on Hold [5]		
		0	New Covered		
		-6.864	Shipped to WIPP		
		507.284	Administrative Adjustments		
Combustible Waste	0	0	New Covered	0	0
		0	Shipped to WIPP		
		0	Administrative Adjustments		
Combustible – Noncombustible Waste	146.167	276.669	3706 Above-ground EM Legacy TRU (MTRU waste only) [4]	748.735	100
		7.488	FY14 Shipped Off-site on Hold [5]		
		42.720	New Covered		
		-36.942	Shipped to WIPP		
		596.790	Administrative Adjustments		
Glass Waste	0	0	New Covered	0	0
		0	Shipped to WIPP		
		0	Administrative Adjustments		
Leaded Glovebox Waste	0	0	New Covered	0	0
		0	Shipped to WIPP		
		0	Administrative Adjustments		
Metallic Waste	0.208	0	3706 Above-ground EM Legacy TRU (MTRU waste only) [4]	0	0
		0	FY14 Shipped Off-site on Hold [5]		
		0	New Covered		
		0	Shipped to WIPP		
		-0.208	Administrative Adjustments		

Table E-~~2~~ 1 (continued)

Treatability Group	FY17 Annual Update (m³)	Proposed Revision 29.0 (m³) [1] [2]	Comments [3]	FY18 Annual Update (m³)	Projection FY19 – FY21 (m³)
Noncombustible Waste	0	0.946	3706 Above-ground EM Legacy TRU (MTRU waste only) [4]	2.818	100
		0.208	FY14 Shipped Off-site on Hold [5]		
		0.208	New Covered		
		-0.624	Shipped to WIPP		
		3.234	Administrative Adjustments		
Solidified Inorganic and Organic Waste	1101.034	0	3706 Above-ground EM Legacy TRU (MTRU waste only) [4]	~~0.208~~0	~~1~~00
		0	FY14 Shipped Off-site on Hold [5]		
		0	New Covered		
		0	Shipped to WIPP		
		-1101.034	Administrative Adjustments		
Solidified Inorganic Noncombustible Waste	0	15.232	3706 Above-ground EM Legacy TRU (MTRU waste only) [4]	86.212	0
		4.274	FY14 Shipped Off-site on Hold [5]		
		0	New Covered		
		-5.106	Shipped to WIPP		
		91.318	Administrative Adjustments		
Solidified Inorganic Particulate Waste	0	83.426	3706 Above-ground EM Legacy TRU (MTRU waste only) [4]	99.516	0
		23.296	FY14 Shipped Off-site on Hold [5]		
		0	New Covered		
		0	Shipped to WIPP		
		99.516	Administrative Adjustments		
Total FY17 Inventory	**1247.409**	**Total FY18 Inventory**		**1437.701**	**200**

[1] MTRU waste volumes are calculated using the conversion: 55-gallon container = 0.208 m^3; 85-gallon container = 0.322 m^3 and SWB=1.9m^3.
[2] Volumes are represented to three decimal places.
[3] Shipping details are found in Appendix F and Administrative Adjustments are found in Appendix G.
[4] Amount already included in the MTRU STP covered inventory.
[5] NMED has determined that the removal of MTRU from the STP will be deferred until more information becomes available and is the final disposition of the waste currently stored at the off-site facility is determined. Amount already included in the MTRU STP covered inventory.

Table E-~~3~~2 Triad MTRU Inventory at TA-55, CMR, and TWF ~~and CMR~~

Location	FY17~~6~~ MTRU Inventory (m^3)[1]	Treatability Group	Proposed Revision 2~~0~~98.0 (m^3)	Comments[~~1~~]	FY18~~7~~ MTRU Inventory (m^3)[~~1~~]
CMR	**~~9.598~~31.695**	S5400 Combustible-Noncombustible Waste	~~22.097~~6.260	~~Reconciled from WCATS inventory (i.e, New Covered)~~New Covered	
		Metallic Waste (metallic waste CVDs are removed from the STP when they are transported from TA-55 (3.199 m3) to the CMR Material Recovery Project. There is no addition of STP volume to CMR.	~~3.199~~0	Material t~~T~~ransfer from TA-55	
				Total FY18~~7~~ CMR S5400 -Combustible-Noncombustible Waste Inventory	***~~34.894~~37.955***
CMR	**0**	S5300 Combustible – Noncombustible Organic Debris Waste	0.208	New Covered	
				Total FY18 CMR S5300 Combustible - Noncombustible Organic Debris Waste Inventory	**0.208**
TA-55	**~~33.197~~127.378**	S5400 Combustible-Noncombustible Waste	~~94.181~~103.664	~~Reconciled from WCATS inventory (i.e., New Covered)~~New Covered	
			0	Administrative Adjustment	
				FY18~~7~~ TA-55 S5400 Combustible-Noncombustible Waste Inventory	**~~127.378~~231.042**
TA-55	**~~5.212~~ 0**	S5300 Combustible Waste	~~00~~19.982	New Covered	
			~~-~~5.212~~0~~	Administrative Adjustment (Reconciled from WCATS inventory)	
				FY18~~7~~ TA-55 S5300 Combustible Waste Inventory	**~~0~~19.982**
TA-55	**~~15.995~~12.796**	Metallic Waste ~~-~~(CVD)	~~9.596~~-6.398	~~Reconciled from WCATS inventory (i.e., newly covered)~~Shipped to CMR	
			~~-3.199~~	8 CVDs have been shipped starting FY14 through 7/2018 - 25.592 m^3. There are 2 CVD left in FY18 STP inventory - (6.398 m^3), which will be shipped to CMR 2019 and captured in the FY19 STP report. Total m^3 for all 10 CVDs is 31.99 m^3 - 8 CVDs already removed from the STP 25.592 m^3 = 6.398 m^3 remaining for FY19. ~~Transfer to CMR to the Material Recovery Project, therefore,~~	~~22.392~~

Location	FY17~~6~~ MTRU Inventory (m^3)[1]	Treatability Group	Proposed Revision 29~~8~~.0 (m^3)	Comments[~~1~~]	FY18~~7~~ MTRU Inventory (m^3)[~~1~~]
				~~volume is removed from the STP.~~	
				FY8~~17~~ TA-55 Metallic (CVD) Waste Inventory	~~15.995~~6.398
TA-55	0	S5100 Metalic Waste	0.416	New Covered	
				FY8 TA-55 S5100 Metallic Waste Inventory	0.416
TA-55	~~5.445~~22.46	S3100 Noncombustible Waste	~~17.015~~11.648	~~Reconciled from WCATS inventory (i.e., New Covered)~~New Covered	
			0	Administrative Adjustment	

Table E-2 (continued)

Location	FY17~~6~~ MTRU Inventory (m^3)[1]	Treatability Group	Proposed Revision 29~~8~~.0 (m^3)	Comments[~~1~~]	FY18~~7~~ MTRU Inventory (m^3)[~~1~~]
				FY18~~7~~ TA-55 S3100 Noncombustible Waste Inventory	~~22.460~~34.108
~~TA-55~~	~~0~~	~~*Solid Inorganic and Organic Waste*~~	~~0~~	~~Administrative Adjustment~~	
				~~***FY16 TA-55 Solidified Inorganic and Organic Waste Inventory***~~	~~0.000~~
TA-55	0	S5900 Combustible-Noncombustible Waste	0.208	New Covered	
				FY18 TA-55 S5900 Combustible-Noncombustible Waste Inventory	0.208
TWF	0	S5400 Combustible-Noncombustible Waste	25.168	New Covered	
				FY18 TWF S5400 Combustible-Noncombustible Waste Inventory	25.168
TWF	0	S5300 Combustible-Noncombustible Organic Debris Waste	5.616	New Covered	
				FY18 TWF S5300 Combustible-Noncombustible Organic Debris Waste Inventory	5.616
Total FY17 TA-55 and CMR Inventory 194.329					
				~~***Total FY17 TA-55 Inventory***~~	~~172.231~~
				~~45.844~~ ***Total FY18~~7~~ TA-55, CMR, and TWF~~R/TA-55~~ Inventory***	~~207.125~~ 361.101

[1] Volumes are represented to three decimal places.

~~Since all waste is shipped from TA-54, there are no shipping data for CMR/TA-55, only transfers to TA-54, which are included in the Appendix G.~~

~~APPENDIX F FY16 MTRU WASTE SHIPMENTS TO WIPP~~

~~*Table F-1 FY17 MTRU Shipments to WIPP*~~

~~FY15 Quarter~~	~~Treatability Group~~	~~Existing FY15 Inventory Volume (m^3)~~	~~New Covered Volume (m^3)~~	~~Total Removed from Inventory (placed below grade) (m^3)~~	~~Total FY14 Inventory (above grade) on Hold (m^3)~~	~~Total Volume Shipped (m^3)[1]~~
~~Q1~~	~~Q1Total~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~
~~Q2~~	~~Q2Total~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~
~~Q3~~	~~Q3 Total~~	~~0~~	~~0~~	~~0~~	~~0~~	~~19.00~~
~~Q4~~	~~Q4 Total~~	~~0~~	~~0~~	~~0~~	~~0~~	~~7.128~~
	~~**Grand Total**~~	~~**0**~~	~~**0**~~	~~**0**~~	~~**0**~~	~~**26.128**~~

~~[1] VOLUMES SHIPPED MAY BE LOWER THAN VOLUMES REMOVED FROM THE STP INVENTORY DUE TO THE REMOVAL OF OVERPACKS BEFORE SHIPPING.~~

APPENDIX F FY18 MTRU WASTE SHIPMENTS TO WIPP

Table F-1 FY18 MTRU Shipments to WIPP

FY18 Quarter	Treatability Group	Existing FY17 Inventory Volume (m^3)	FY18 New-Covered (m^3)	Total Removed from Inventory (m^3)	FY18 Total Volume Shipped (m^3)[1]
Q1	Cemented Sludge Waste	2.080	0	2.080	2.080
	Combustible-Noncombustible Waste	22.744	0	22.744	22.744
	Noncombustible Waste	0	0	0	0
	Solidified Inorganic Noncombustible Waste	1.872	0	1.872	1.872
Q2	Cemented Sludge Waste	2.912	0	2.912	2.912
	Combustible-Noncombustible Waste	11.588	0	11.588	11.588
	Noncombustible Waste	0.624	0	0.624	0.624
	Solidified Inorganic Noncombustible Waste	2.194	0	2.194	2.080
Q3	Cemented Sludge Waste	1.872	0	1.872	1.872
	Combustible-Noncombustible Waste	2.610	0	2.610	2.496
	Noncombustible Waste	0	0	0	0
	Solidified Inorganic Noncombustible Waste	1.040	0	1.040	1.040
Q4	Cemented Sludge Waste	0	0	0	0
	Combustible-Noncombustible Waste	0	0	0	0
	Noncombustible Waste	0	0	0	0
	Solidified Inorganic Noncombustible Waste	0	0	0	0
Grand Total		**49.536**	**0**	**49.536**	**49.308**

[1] Volumes shipped may be lower than volumes removed from the STP inventory due to the removal of overpacks before shipping.

Table F-2 FY14 MTRU Shipments to WCS[1]

FY14 Quarter	Treatability Group	Existing FY14 Inventory Volume (m^3) [12]	New Covered Volume (m^3)	Inventory on Hold in FY17 (m^3)	Total Volume Removed from Inventory FY18 (m^3)	Inventory on Hold in FY18 (m^3)
Q3 (all shipment dates of TRU containers to WCS were in FY14 Q3)	Cemented Sludge Waste	22.256	0	18.720	-6.864	11.856
	Combustible-Noncombustible Waste	99.954	0	44.430	-36.942	7.488
	Noncombustible Waste	0.832	0	0.832	-0.624	0.208
	Solidified Inorganic Noncombustible Waste	9.380	0	9.380	-5.106	4.274
	Solidified Inorganic Particulate Waste	23.296	0	23.296	0.000	23.296
Grand Total		**155.718**	**0**	**96.658**	**-49.536**	**47.122**

~~FY14 Quarter~~	~~Treatability Group~~	~~Existing FY14 Inventory Volume (m^3)~~	~~FY14 New Covered Volume (m^3)~~	~~Total Inventory on Hold (m^3)~~	~~FY17 Shipments to WIPP from WCS~~	~~Total FY14 Remaining Volume Shipped on Hold (m^3)~~[2]	~~FY18 LANL Total Disposed from WCS To WIPP~~	~~FY14 Total Inventory Disposed in on Hold FY17 (m^3)~~
~~Q3~~	~~Combustible-Noncombustible Waste Total~~	~~120.848~~	~~0.416~~	~~121.264~~	~~-42.268~~	~~121.264~~ 78.996	~~-52.492~~ [Note]	~~-42.268~~26.504
	~~Metallic Waste Total~~	~~0.208~~	~~0~~	~~0.208~~	~~-0.208~~	~~0.208~~ 0	~~0~~	~~0-0.208~~
	~~Noncombustible Waste Total~~	~~14.050~~	~~0~~	~~14.050~~	~~0~~	~~13.936~~ 14.05	~~-3.858~~	~~10.192~~
	~~Solidified Inorganic and Organic Waste Total~~	~~20.196~~27.174	~~0~~	~~20.196~~ 27.174	~~-19.968~~	~~19.968~~ 7.206	~~-6.864~~	~~-19.968~~ 0.342
	~~**Grand Total**~~	~~**155.302** **162.280**~~	~~**0.416** **0**~~	~~**155.718** **162.696**~~	~~**-62.444**~~	~~**155.376** **100.252**~~	~~**-63.211**~~	~~**-62.444** **37.038**~~

[1] Volumes shipped in FY14 but not removed from the STP inventory.

[2] ~~Volumes shipped are lower than in prior submittals due to the removal of overpacks used for shipping only (i.e., not processed through characterization). This type of volume is not waste. Instead, the volume of the inner containers has been retained~~Volumes shipped may be lower than volumes removed from the STP inventory due to the removal of overpacks before shipping.

Table F-3 FY18~~14~~ MTRU Shipments to AMWTP (INL)[1]

~~FY14~~ FY18 Quarter	Treatability Group	Existing FY14 Inventory Volume (m^3)	New Covered Volume (m^3)	Total Inventory on Hold[2] (m^3)	Total Volume Shipped (m^3)[3]	Total Disposed in FY18~~7~~ (m^3)
Q1	Combustible-Noncombustible Waste Total	~~5.049~~0	0	~~5.049~~0	~~5.049~~0	~~-5.049~~0
Q2	Combustible-Noncombustible Waste Total	~~15.294~~0	0	~~15.294~~0	~~15.294~~0	~~-15.294~~0
Q3	Combustible-Noncombustible Waste Total	~~2.549~~0	0	~~2.549~~0	~~2.549~~0	~~-2.549~~0
Q4	Combustible-Noncombustible Waste Total	0	0	0	0	0
(See Note) Grand Total		**~~22.892~~0**	**0**	**~~22.892~~0**	**~~22.892~~0**	**~~-22.892~~0**

[1] Volumes shipped in FY14 but not removed from the STP inventory.

~~[2] LANL waste treated at INL and stored at a WCS facility as of November 2014. Original containers and volume continue to be tracked since treated containers were not created at LANL.~~

~~[3] Volumes shipped may be lower than volumes removed from the STP inventory due to the removal of overpacks before shipping.~~

Table F-4 FY14 MTRU Shipments to from WCS to WIPP[1]

Treatability Group	FY14 on Hold Shipped to WCS in FY14 Q3 (m^3) [2]	FY14 on Hold New Covered at WCS from FY15 - FY18 (m^3)	FY14 on Hold Remaining at WCS in FY17 (m^3)	FY14 on Hold Removed from Inventory (-Shipped from WCS to WIPP in FY18 by Quarter) (m^3)		FY14 on Hold Remaining at WCS in FY18 (m^3)
Cemented Sludge Waste	22.256	0	18.720	Q1	-2.080	11.856
				Q2	-2.912	
				Q3	-1.872	
				Q4	0	
Combustible-Noncombustible Waste	99.954	0	44.430	Q1	-22.744	7.488
				Q2	-11.588	
				Q3	-2.610	
				Q4	0	
Noncombustible Waste	0.832	0	0.832	Q1	0	0.208
				Q2	-0.624	
				Q3	0	
				Q4	0	
Solidified Inorganic Noncombustible Waste	9.380	0	9.380	Q1	-1.872	4.274
				Q2	-2.194	
				Q3	-1.040	
				Q4	0	
Solidified Inorganic Particulate Waste	23.296	0	23.296	Q1	0	23.296
				Q2	0	
				Q3	0	
				Q4	0	
Grand Total	**155.718**	**0**	**96.658**		**-49.536**	**47.122**

~~FY14 Quarter~~	~~Treatability Group~~	~~Existing FY14 Inventory Volume (m^3)~~	~~New Covered Volume (m^3)~~	~~Total Inventory on Hold (above grade) (m^3)~~	~~Total Volume Shipped (above grade) (m^3)~~[2]
~~Q2~~	~~Combustible-Noncombustible Waste Total~~	~~9.048~~	~~0~~	~~9.048~~	~~8.820~~
	~~Grand Total~~	~~9.048~~	~~0~~	~~9.048~~	~~8.820~~

[1] Volumes shipped in FY14 but not removed from the STP inventory.

~~[2] Volumes shipped may are be lower than in prior submittals than volumes removed from the STP inventory due to the removal of overpacks used for shipping only (i.e., not processed through characterization). This type of volume is not wastes before shipping. Instead, the volume of the inner containers has been retained.~~

APPENDIX G CURRENT YEAR MTRU INVENTORY – ADMINISTRATIVE ADJUSTMENTS

Table G-1 FY18~~7~~ MTRU Administrative Adjustments to TA-54 Inventory

~~Treatability Group~~	~~Administrative Adjustment~~	~~Volume (m^3)~~
~~*Cemented Sludge*~~	~~STP containers from Cemented Sludge were reassigned to Solidified Inorganic and Organic Waste treatability group consisten with current categorization of waste types for shipment to WIPP. Volume changes are also included~~	~~-82.238~~250
	~~Rounding~~	~~-0.012~~
~~***Cemented Sludge Net Adjustment***~~		~~**-82.250**~~
~~*Combustible-Noncombustible Waste*~~	~~Reclassified as MLLW (LA-W935)~~	~~-0.208~~
	~~Reconciliation of WCATS inventory – New Covered~~	~~1.878~~
	~~STP containers from Compustibile-Noncombustible Waste treatability group reassigned to Solidified Inorganic and Organic Waste treatability group consistent with current categorization of waste types for shipment to WIPP. Volume changes included in direct loaded SWBs.~~	~~-188.173~~
~~***Combustible-Noncombustible Net Adjustment***~~		~~**-186.503**~~
~~*Combustible Waste*~~	~~STP containers from Combustible Waste treatability groups were to Solidified Inorganic and Organic Waste treatability groups consistent with current categorization of waste types for shipment to WIPP. Volume changes are also included.~~	~~-1.154~~5
	~~Rounding adjustments~~	~~-0.0005~~
~~***Combustible Waste Net Adjustment***~~		~~**-1.154**~~
~~*Metallic Waste*~~	~~STP containers from Metallic Waste treatability group reassigned to Solidified Inorganic and Organic Waste treatability group consistent with current categorization of waste types for shipment to WIPP. Volume changes are also included.~~	~~-0.208~~ 2.101
	~~Reconciliation for WCATS inventory, including rounding adjustments.~~	~~-2.309~~
~~***Metallic Waste Net Adjustment***~~		~~**-2.517**~~ **101**
~~*Noncombustible Waste*~~	~~STP containers from NonCombustible Waste treatability group were reassigned to Solidified Inorganic and Organic treatability group consistent with current categorization of waste types for shipment to WIPP. Volume changes are included.~~	~~-22.108~~
~~***Noncombustible Waste Net Adjustment***~~		~~**-22.108**~~
Treatability Group	**Administrative Adjustment**	**Volume (m3)**
Cemented Sludge Waste	3706 Above-ground EM Legacy TRU (MTRU waste only) in the "CIN" waste streams as applied by LANL AKEs/LANL Generators. This waste was removed from the Combustible-Noncombustible Waste and Solidified Organic and Inorganic Waste treatability groups. ~~A total of 37.786 cm3 remains onsite.~~The total volume on-site is listed in Table 4.0-1.	55.288
	FY14 Shipped Off-site on Hold in the "CIN" waste streams as applied by LANL AKEs. This waste was removed from the Combustible-Noncombustible Waste and Solidified Inorganic and Organic Waste treatability groups. The total volume on-site is listed in Table F-2..~~A total of 11.856 cm^3 remains onsite.~~	11.856
	Containers from the Combustible-Noncombustible Waste, Inorganic Salt Noncombustible Waste, and Solidified Inorganic and Organic Waste treatability groups were reverted back to the Cemented Sludge treatability group to be	507.284

~~Treatability Group~~	~~Administrative Adjustment~~	~~Volume (m^3)~~
	consistent with N3B reporting for the "CIN" waste streams as defined by LANL AKEs. A portion of this waste was not collected in the last annual report.	
Cemented Sludge Waste Net Adjustment		**507.284**
Combustible-Noncombustible Waste	3706 Above-ground EM Legacy TRU (MTRU waste only) in the "MHD" waste streams as applied by LANL AKEs/LANL Generators. This waste was removed from the Combustible Waste, Noncombustible Waste, and Solidified Organic and Inorganic Waste treatability groups. The total volume on-site is listed in Table 4.0-1.~~A total of 248.081 cm3 remains onsite.~~	276.669
	FY14 Shipped Off-site on Hold in the "MHD" waste streams as applied by LANL AKEs. This waste was moved into the Cemented Sludge Waste, Noncombustible Waste, Solidified Inorganic Noncombustible Waste, and Solidified Inorganic Particulate Waste treatability groups. The total volume on-site is listed in Table F-2.	7.488
	Containers from the Solidified Inorganic and Organic Waste treatability group were reverted back to the Combustible-Noncombustible Waste treatability group. This categorization is consistent with N3B reporting for the "MHD" waste streams as defined by LANL AKEs.	596.790
Combustible-Noncombustible Waste Net Adjustment		**596.790**
Metallic Waste	Container from the Metallic Waste treatability group was moved into the Combustible-Noncombustible Waste treatability group.	-0.208
Metallic Waste Net Adjustment		**-0.208**
Noncombustible Waste	3706 Above-ground EM Legacy TRU (MTRU waste only) in the "MIN04/MSG04" waste streams as applied by LANL AKEs/LANL Generators. This waste was removed from the Solidified Inorganic and Organic Waste Waste treatability group. The total volume on-site is listed in Table 4.0-1..	0.946
	FY14 Shipped Off-site on Hold in the "MIN04/MSG04" waste streams as applied by LANL AKEs. This waste was removed from the Combustible-Noncombustible Waste and Solidified Inorganic and Organic Waste treatability groups. The total volume on-site is listed in Table F-2.	0.208
	Containers from the Solidified Inorganic and Organic Waste treatability group were reverted back to the Noncombustible Waste treatability group. This categorization is consistent with N3B reporting for the "MIN04/MSG04" waste stream as defined by LANL AKEs.	3.234

Table G-12 (continued)

Treatability Group	**Administrative Adjustment**	**Volume (m3)**
Noncombustible Waste Net Adjustment		**3.234**
Solidified Inorganic and Organic Waste	3706 Above-ground EM Legacy TRU (MTRU waste only) was moved into the Cemented Sludge Waste, Combustible-Noncombustible Waste, Noncombustible Waste, Solidified Inorganic Noncombustible Waste, and Solidified Inorganic Particulate Waste treatability groups. The total volume on-site is listed in Table 4.0-1.	0
	FY14 Shipped Off-site on Hold was moved into the Cemented Sludge Waste, Combustible-Noncombustible Waste, Noncombustible Waste, Solidified Inorganic Noncombustible Waste, and Solidified Inorganic Particulate Waste treatability groups. The total volume on-site is listed in Table F-2.	0
	Containers from the Solidified Inorganic and Organic Waste treatability group were reverted back to the Cemented Sludge Waste, Combustible-	-1101.034

	Noncombustible Waste, Noncombustible Waste, Solidified Inorganic Noncombustible Waste, and Solidified Inorganic Particulate Waste treatability groups. This categorization is consistent with N3B reporting for the "CIN/MHD/MIN/MSG" waste streams as defined by LANL AKEs.	
Solidified Inorganic and Organic Waste Net Adjustment		**-1101.034**
Solidified Inorganic Noncombustible Waste	3706 Above-ground EM Legacy TRU (MTRU waste only) in the "MIN03" waste streams as applied by LANL AKEs/LANL Generators. This waste was removed from the Combustible-Noncombustible Waste and Solidified Organic and Inorganic Waste treatability groups. The total volume on-site is listed in Table 4.0-1.	15.232
	FY14 Shipped Off-site on Hold in the "MIN03" waste streams as applied by LANL AKEs. This waste was removed from the Combustible-Noncombustible Waste and Solidified Inorganic and Organic Waste treatability groups. The total volume on-site is listed in Table F-2.	4.274
	Containers from the Solidified Inorganic and Organic Waste treatability group were reverted back to the Solidified Inorganic Noncombustible Waste treatability group. This categorization is consistent with N3B reporting for the "MIN03" waste stream as defined by LANL AKEs.	91.318
Solidified Inorganic Noncombustible Waste Net Adjustment		**91.318**
Solidified Inorganic Particulate Waste	3706 Above-ground EM Legacy TRU (MTRU waste only) in the "MIN02" waste streams as applied by LANL AKEs/LANL Generators. This waste was removed from the Combustible-Noncombustible Waste and Solidified Organic and Inorganic Waste treatability groups. The total volume on-site is listed in Table 4.0-1.	83.426
	FY14 Shipped Off-site on Hold in the "MIN02" waste streams as applied by LANL AKEs. This waste was removed from the Combustible-Noncombustible Waste and Solidified Inorganic and Organic Waste treatability groups. The total volume on-site is listed in Table F-2.	23.296
	Containers from the Solidified Inorganic and Organic Waste treatability group were reverted back to the Solidified Inorganic Particulate Waste treatability group. This categorization is consistent with N3B reporting for the "MIN02" waste stream as defined by LANL AKEs.	99.516
Solidified Inorganic Particulate Waste Net Adjustment		**99.516**
Total Net TA-54 Adjustment		**196.900**

Table G-~~3~~2 FY18~~7~~ MTRU Administrative Adjustments for TA-55, CMR and TA-55 Inventory

Location	Treatability Group	Administrative Adjustment	Volume (m^3)
CMR	*S5400 - Combustible-Noncombustible Waste* ~~*Combustible-Noncombustible Waste*~~	~~from TA-55 Transferred the covery Project . from TA-55 to CMR to for storage.~~	~~3.1990~~
Net Adjustment CMR S5400 Combustible-Noncombustible Waste Inventory			**~~3.1990~~**
CMR	S5300 - Combustible-Noncombustible Organic DebrisWaste		0
Net Adjustment CMR S5300* Combustible-Noncombustible Organic DebrisWaste *Inventory			**0**
TA-55	*S5400 - Combustible-Noncombustible Waste*		0
			~~0~~

Location	Treatability Group	Administrative Adjustment	Volume (m^3)
Net Adjustment TA-55 S5400 Combustible-Noncombustible Waste			**0**
TA-55	*S5300 - Combustible - Noncombustible Waste*		~~0~~0
Net Adjustment TA-55 S5300 Combustible - Noncombustible Waste~~Combustible Waste~~			**~~0~~0**
TA-55	*Metallic* Waste - CVD	~~Transferred to CMR for storage and the Material Recovery Project~~etrieval ~~. T~~	0~~-3.199~~
Net Adjustment TA-55 Metallic Waste (CVD)			**~~-3.199~~0**
TA-55	*S5100 Metallic* Waste		0
Net Adjustment TA-55 S5100 Metallic Waste			**0**
TA-55	*S5900 - Combustible - Noncombustible Waste*		0
Net Adjustment TA-55 S5900 Combustible - Noncombustible Waste			**0**
TA-55	*S3100 Noncombustible Waste*		0
Net Adjustment TA-55 S3100 Noncombustible Waste			**0**
~~TA-55~~	~~*Solidified Inorganic and Organic Waste*~~		~~0~~
~~Net Adjustment TA-55 Solidified Inorganic and Organic Waste~~			**~~0~~**
TWF	*S5400 Combustible-Noncombustible Waste*		0
Net Adjustment TWF S5400 Combustible-Noncombustible Waste ~~Net Adjustment TA-55 Inventory~~			**0~~-3.199~~**
TWF	*S5300 Combustible-Noncombustible Organic Debris Waste*		0
Net Adjustment TWF S5300 Combustible-Noncombustible Organic Debris Waste			**0**
Total Net TA-55, ~~/~~CMR and TWF Adjustments			**~~0~~0**

APPENDIX H MLLW TREATMENT FACILITIES

Table H-1 Commercial Facilities Contacted for Waste Treatment Capabilities

Commercial Facility	Location
Perma-Fix (including Material & Energy Corporation in Tennessee; Diversified Scientific Services, Inc. in Tennessee; and Perma-Fix North West in Washington; and Perma-Fix Florida in Gainesville, Florida) Perma-Fix has permitted treatment facilities for the treatment of low-level radioactive and low-level mixed waste. The facilities can perform to include thermal treatment, compaction, macroencapsulation, neutralization, and stabilization. All are licenced within their respective State of location under the Nuclear Regulatory Commission regulations and permitted under the RCRA regulations	Florida, Washington and Tennessee
Waste Control Specialists (WCS) WCS, located in Andrews, Texas, is a permitted treatment facility for the treatment and disposal of LLW and MLLW. The site has regulatory authorization for industrial solid waste and hazardous waste storage, processing, and land disposal under RCRA permit # HW-50358 granted by the state of Texas. EPA has authorized the site for treatment, storage, and land disposal of Toxic Substances Control Act (TSCA) wastes (TXD988088464). The facility can process waste that requires compaction, microencapsulation, macroencapsulation, neutralization, deactivation, chemical oxidation, chemical reduction and stabilization.	Texas
EnergySolutions of Utah (including Bear Creek Operations in Tennessee) Energy Solutions, located in Clive, Utah, is a permitted treatment facility for the treatment and disposal of LLW and MLLW. The site houses both a low-level radioactive waste treatment facility and a low-level mixed waste treatment facility, which are licensed under state of Utah Department of Environmental Quality, License Number UT2300249 and by the EPA hazardous waste permit number UT0982598898.	Utah
Nuclear Fuel Services	Tennessee
Integrated Environmental Services	Tennessee
NSSI	Texas

APPENDIX I CORRESPONDENCE

Table I-1 FY18 Expedited Shipment Letters

Letter Date	Description	Letter Number	Revision Reference
~~04/21/2017~~	No Expedited Shipment Letters for FY18~~Notice of Completion of Expedited Off-Site Waste Shipment Activity 3.3.4 B and C~~	~~EPC-DO-17-156~~	~~28~~
~~01/07/2019~~	~~Notice of Completion of Expedited Off-Site Waste Shipment Activity 3.3.4 B and C~~	~~EPC-DO-18-438~~	~~28~~

Table I-2 FY18 Correspondence from DOE/NNSA/LANS

Letter Date	Description	Letter Number	Revision Reference
~~08/11/2017~~	~~Notice of Completion of Off-Site Waste Shipment Activity 4.0, FY17, Q3~~	~~EPC-DO-17-285~~	~~28~~
10/17/2017~~11/14/2017~~	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory~~Notice of Completion of Off-Site Waste Shipment Activity 4.0, FY17, Q4~~	EPC-DO: 17-442~~EPC-DO-17-456~~	29~~28~~
11/14/2017~~05/10/2017~~	Notice of Completion of Off-Site Waste Shipment, Fiscal Year 2017, 4th Quarter, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory~~Notice of Completion of Off-Site Waste Shipment Activity 4.0, FY17, Q2~~	EPC-DO: 17-456~~WM-DO-17-001~~	29~~28~~
12/18/2017~~06/15/2017~~	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory~~Notice of Completion of Off-Site Waste Shipment Activity 4.0.~~	EPC-DO: 17-556~~WM-DO-17-228~~	29~~28~~
1/9/2018~~08/08/2017~~	Notice of Completion of Off-Site Waste Shipment, Fiscal Year 2018, 1st Quarter, Activity 4.0, Compliance Plan STP, Federal Facility Compliance Order, LANL~~Notice of Completion of Off-Site Waste Shipment Activity 4.0~~	EPC-DO: 18-010~~WM-DO-17-295~~	29~~28~~
1/29/2018 ~~08/21/2017~~	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory~~Notice of completion of Off-Site Waste Shipment Activity 4.0~~	EPC-DO: 18-025~~WM-DO-17-311~~	29~~28~~
1/24/2018 ~~10/27/2017~~	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory~~Notice of Completion of Off-Site Waste Shipment Activity 4.0~~	EPC-DO: 18-043~~WM-DO-17-422~~	29~~28~~
3/12/2018 ~~12/4/2017~~	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory~~Notice of Completion of Expedited Off-Site Waste Shipment Activity 3.3.4 B and C.~~	EPC-DO: 18-064~~EPC-DO-17-497~~	29~~28~~
2/13/2018 ~~01/05/2018~~	Submittal of Site Treatment Plan (STP), Fiscal Year 2017 Update and Proposed Revision 27.0, Federal Facility Compliance Order, October 4, 1995, Los Alamos National Laboratory~~Notice of Completion of Expedited Off-Site Waste Shipment Activity 4.0~~	EPC-DO: 18-076~~WM-DO-17-556~~	29~~28~~
3/28/2018 ~~02/14/2017~~	Request For Extension of time to NMED for Submittal of Site Treatment Plan, Submittal of Site Treatment Plan, Fiscal Year 2017 Update and Proposed Revision 27.0, Federal Facility Compliance Order 4, 1995,	EPC-DO: 18-129~~WM-DO-17-001~~	29~~28~~

Letter Date	Description	Letter Number	Revision Reference
	Los Alamos National Laboratory ~~Notice of Completion of Expedited Off-Site Waste Shipment Activity 4.0~~		
5/4/2018 ~~02/13/2017~~	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory~~Federal Facilty Compliance Order – Notice of Change of Project Manager~~	EPC-DO: 18-159~~ADESH-17-020~~	29~~28~~
~~09/15/2017~~	~~Notice of Completion of Expedited Off-Site Waste Shipment Activity 4.0~~	~~WM-DO-17-334~~	~~28~~
5/4/2018	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory	EPC-DO: 18-186	29
5/9/2018	Notice of Change of Project Manager-Site Treatment Plan (STP), Federal Facility Compliance Order (FFCO), Los Alamos National Laboratory (LANL)	ADESH: 18-029	29
5/15/2018	Notice of Completion of Off-Site Waste Shipment, Fiscal Year 2018, 2nd Quarter, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory	EPC-DO: 18-162	29

Table I-2 (continued)

Letter Date	Description	Letter Number	Revision Reference
5/31/2018	Submittal of Site Treatment Plan (STP), Fiscal Year 2017 Update and Proposed Revision 28.0, Federal Facility Compliance Order, October 4, 1995, Los Alamos National Laboratory	EPC-DO: 18-211	29
6/7/2018	15-Day Notification, Proposed Deletion of Waste From The Los Alamos National Laboratory Site Treatment Plan, Federal Facility Compliance Order (FFCO)	EPC-DO: 18-225	29
6/15/2018	Notice of Change of Project Manager – Site Treatment Plan (STP), Feferal Facility Compliance Order (FFCO), Los Alams National Laboratoty (LANL)	ADESH: 18-034	29
6/28/2018	Proposed Extension of Compliance Dates for Activity 3.2(A) in the Los Alamos National Laboratory Site Treatment Plan (STP) Revision 28 (Rev. 28) Fiscal Year 2017 (FY17) Update	EPC-DO: 18-239	29
8/14/2018	Notice of Completion of Off-Site Waste Shipment, Fiscal Year 2018, 3nd Quarter, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory	EPC-DO: 18-274	29
8/23/2018	Withdrawal and Resubmittal Request for the Fiscal Year 2017, Site Treatment Plan, Federal Facility Compliance Order, Revision 28, Los Alamos National Laboratory	EPC-DO: 18-294	29

Table I-3 FY18 Correspondence from DOE EM-LA/N3B

Letter Date	Description	Letter Number	Revision Reference
9/14/2018	Notification of the Newport News Nuclear BWXT – Los Alamos, LLC, Project Manager, the U.S. Department of Energy Contact, and Confirmation of Responsibilities in Accordance with the 1995 Federal Facility Compliance Order	EMID-700077 N3B-18-0208	29
11/7/2018	Notice of Completion of Off-Site Waste Shipments for the Fourth Quarter of Fiscal Year 2018 for Los Alamos National Laboratory as Required by the Federal Facility Compliance Order Site Treatment Plan, Compliance Plan, Activity 4.0	EMID-700122 N3B-18-0305	29
1/14/2019	Notice of Completion of Off-Site Waste Shipment Activity in the Compliance Plan, Site Treatment Plan, Activity 4.0	EMID-700187 N3B-19-0006	29

1/30/2019	Notice of Completion of Off-Site Waste Shipment Activity for December 20, 2018, as Required by the Federal Facility Compliance Order, Site Treatment Plan, Compliance Plan, Section 4.0	EMID-700213 N3B-19-0030	29
2/13/2019	Notice of Completion of Off-Site Waste Shipments for the First Quarter of Fiscal Year 2019 for Los Alamos National Laboratory as Required by the Federal Facility Compliance Order Site Treatment Plan, Compliance Plan, Activity 4.0	EMID-700228 N3B-19-0031	29
3/1/2019	Request for Extension for Submittal of Site Treatment Plan, Fiscal Year 2018, Update and Proposed Revision 29.0, Federal Facility Compliance Order	EMID-700311 N3B-19-0058	29
5/9/2019	Second Request for Extension for Submittal of Site Treatment Plan, Fiscal Year 2018, Update and Proposed Revision 29.0, Federal Facility Compliance Order	EMID-700432 N3B-19-0141	29
5/9/2019	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory [April 4, 2019, shipment]	EMID-700433 N3B-19-0124	29
5/14/2019	Notice of Completion of Off-Site Waste Shipments for the Second Quarter of Fiscal Year 2019 for Los Alamos National Laboratory as Required by the Federal Facility Compliance Order Site Treatment Plan, Compliance Plan, Activity 4.0	EMID-700436 N3B-19-0123	29

Table I-3 (continued)

Letter Date	**Description**	**Letter Number**	**Revision Reference**
5/28/2019	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory [April 25, 2019, shipment]	EMID-700452 N3B-19-0143	29
5/28/2019	Revised Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory [April 4, 2019, shipment]	EMID-700453 N3B-19-0164	29
6/7/2019	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory [May 2, 2019, shipment]	EMID-700465 N3B-19-0166	29
6/25/2019	Notification of the Newport News Nuclear BWXT-Los Alamos, LLC, Project Manager Name Change for the 1995 Federal Facility Compliance Order	EMID-700490 N3B-19-0185	29
6/25/2019	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory [May 21 and 23, 2019, shipments]	EMID-700491 N3B-19-0179	29
6/26/2019	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory [May 30, 2019, shipment]	EMID-700496 N3B-19-0180	29
7/10/2019	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory [June 6 and 13, 2019, shipments]	EMID-700503 N3B-19-0190	29
7/25/2019	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory [June 20 and 27, 2019, shipments]	EMID-700518 N3B-19-0196	29

8/8/2019	Notice of Completion of Off-Site Waste Shipments for the Third Quarter of Fiscal Year 2019 for Los Alamos National Laboratory as Required by the Federal Facility Compliance Order, Site Treatment Plan, Compliance Plan, Section 4.0	EMID-700533 N3B-19-0228	29
8/19/2019	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory [two shipments from WCS July 11, 2019]	EMID-700542 N3B-19-0230	29
9/4/2019	Revised Notice of Completion of Off-Site Waste Shipments for the Third Quarter of Fiscal Year 2019 for Los Alamos National Laboratory as Required by the Federal Facility Compliance Order Site Treatment Plan, Compliance Plan, Activity 4.0	EMID-700565 N3B-19-0259	29
9/18/2019	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory [August 15, 2019, shipment]	EMID-700578 N3B-19-0264	29
9/26/2019	Notice of Completion of Off-Site Waste Shipment for Final Disposal, Activity 4.0, Compliance Plan, Site Treatment Plan, Federal Facility Compliance Order, Los Alamos National Laboratory [August 29, 2019, shipment]	EMID-700592 N3B-19-00277	29

APPENDIX JHISTORY OF CHANGES TO THE CP AND FFCO

As discussed in Part III (CP), Section 1.2, 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. This appendix provides a summary of these CP changes and of modifications to the FFCO since its issuance.

To date, there have been 27 revisions and three amendments to the CP. In addition, the FFCO was amended once on May 20, 1997. Table J-1 provides a summary of these changes. More detailed descriptions can be found in the CP Update portion of each year's STP *Annual Update* and the original correspondence requesting each change.

Table J-1 Summary of Changes to the CP and the FFCO

Action	Document Modified	Effective Date	Effect on FFCO/STP
Rev. 1.0	STP/CP	6/12/96	Added off-site treatment as a parallel preferred option for most MLLW treatability groups.
Rev. 2.0	STP/CP	12/9/96	Reduced volume of LA-W928 by approving reclassification of ~~sludges~~sludge as LLW.
Amendment 1.0	STP/CP	10/30/96	Divided original volume of LA-W929 into three subgroups, and added new Activities and Compliance Dates.
Rev. 3.0	STP/CP	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/CP	9/4/97	Extended CP Activity 3.1.2B Compliance Date to 12/29/97.
Rev. 4.0	STP/CP	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/CP	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 CP Appendices, and deleted treated items.
Rev. 6.0	STP/CP	7/31/98	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.
Rev. 7.0	STP/CP	11/30/98	Removed on-site treatment skids, added STP inventory items, added on-site recycling/re-use and radiological decontamination, added notification for off-site treatability studies.
Rev. 8.0	STP/CP	12/3/98	Extended compliance dates for treatment of MTRU waste.
Rev. 9.0	STP/CP	6/7/00	Added and deleted volumes reported in FY98 *Annual Update* to certain treatability groups.
Amendment 3.0	STP/CP	8/30/99	Transferred three items to MTRU, transferred one item to subgroup within same treatability group.
Rev. 10.0	STP/CP	12/18/00	Added and deleted volumes reported in FY99 *Annual Update* to certain treatability groups.
Rev. 11.0	STP/CP	4/18/01	Added and deleted volumes reported in FY00 *Annual Update.*

Table J-~~2~~ 1 (continued)

Action	Document Modified	Effective Date	Effect on FFCO/STP
Rev. 12.0	STP/CP	3/13/02	Added and deleted volumes reported in FY01 *Annual Update*. Extended CP Activity 3.1.5A Compliance Date to 8/25/03. Extended CP Activity 3.1.11A to 2/01/04. Removed the requirement to develop treatment technologies and the associated compliance schedule in CP Activity 4.0 and added language specifying that MTRU waste would be shipped off-site to WIPP for disposal.
Rev 13.0	STP/CP	7/14/03	Added and deleted volumes reported in FY02 *Annual Update*.
Rev 14.0	STP/CP	1/5/05	Added and deleted volumes reported in FY03 *Annual Update*.
Rev 15.0	STP/CP	8/16/05	Added and deleted volumes reported in FY04 *Annual Update*.
Rev 16.0	STP/CP	12/12/06	Added and deleted volumes reported in FY05 *Annual Update*. Extended CP Activity 3.1.8(A) Compliance Date to 8/09/07. Extended CP Activity 3.1.9(A) Compliance Date to 8/09/07. Extended CP Activity 3.1.10(A) Compliance Date to 8/31/07. Extended CP Activity 3.1.11(A) Compliance Date to 12/31/07. Extended CP Activity 3.2(J) Compliance Date to 12/31/07. Reclassified 0.2082 m^3 of LA-W934 High Activity MLLW waste to MTRU waste.
Rev 17.0	STP/CP	6/26/08	Added and deleted volumes reported in FY06 *Annual Update*. Extended CP Activity 3.1.5(A) Compliance Date to 12/31/08. Extended CPV Activity 3.1.8(A) Compliance Date to 8/28/08. Extended CP Activity 3.1.9(A) Compliance Date to 8/28/08. Extended CP Activity 3.2(J) Compliance Date to 12/31/08.
Rev 18.0	STP/CP	1/9/09	Added and deleted volumes reported in FY07 *Annual Update*. Extended CP Activity 3.1.8(A) Compliance Date to 8/28/09. Extended CP Activity 3.1.9(A) Compliance Date to 8/28/09. Proposed a new Section 3.3.4 for Treatability Group, LA-W935 *10–100 nCi/g Waste* with new CP Activity 3.3.4 (A) Compliance Date 12/01/13 and CP Activity 3.3.4 (B) Compliance Date 12/31/13. Extended CP Activity 3.2(J) Compliance Date to 12/31/10.
Rev 19.0	STP/CP	2/5/10	Added and deleted volumes reported in FY08 Annual Update. Extended compliance date for CP Activities 3.1.8(A) and 3.1.9(A) to 8/28/12. Proposed a new milestone of 12/31/2010 for 3.1.4(A) and a new milestone 3.3.4(C) for *10–100 nCi/g Waste*.
Rev 20.0	STP/CP	11/8/10	Added and deleted volumes reported in FY09 Annual Update. Proposed an extended compliance date for CP Activity 3.2(J).
Rev 21.0	STP/CP	3/21/12	Added and deleted volumes reported in FY10 Annual Update. Proposed new compliance date for CP Activity 3.1.8(A).
Rev 22.0	STP/CP	12/10/12	Added and deleted volumes reported in FY11 Annual Update.
Rev 23.0	STP/CP	08-26-2015	Added and deleted volumes reported in FY12 Annual Update Added Table 4.0-1 Treatability Groups for the Framework Agreement MTRU Waste
Rev 24.0	STP/CP	08-26-2015	Added and deleted volumes reported in FY13 Annual Update Proposed compliance date for CP Activity 3.1.5(A) Proposed compliance date for CP Activity 3.1.8(A) Extended CP Activity 3.2(J) Compliance Date to 6/30/2018 Proposed compliance date for CP Activity 3.3.4 (A and B)
Rev 25.0	STP/CP	TBD	Added and deleted volumes reported in FY14 Annual Update On Hold volumes reported shipped in FY14 Annual Update Proposed compliance date for CP Activity 3.1.8(A) Proposed compliance date for CP Activity 3.3.4 (A and B)

Table J-~~2~~ 1 (continued)

Action	Document Modified	Effective Date	Effect on FFCO/STP
Rev 26.0	STP/CP	01-30-2017	Added and deleted volumes reported in FY15 Annual Update On Hold volumes reported shipped in FY14 Annual Update Proposed compliance date for CP Activity 4.0-2 (C)
Rev 27.0	STP/CP	03/21/2017	Added and deleted volumes reported in FY16 Annual Update On Hold volumes reported shipped in FY14 Annual Update Proposed compliance date for CP Activities 4.0-2(a), and 4.0-2(c).
Rev 28.0	STP/CP	5/9/2019	Added and deleted volumes reported in FY17 Annual Update On Hold volumes reported shipped in FY14 Annual Update Proposed compliance date for CP Activities 3.1.8-2(A), and 3.3.4-2 (A and B).
Rev 29.0	STP/CP	TBD	-Added and deleted volumes reported in FY18 Annual Update using volume information spreadsheets supplied from TA-55, CMR and TWF and other databases for volume information at TA-54. -Updated Tables and Appendices throughout document. -Updated Part III, Sectio 3.2, FTWCs compliance date extension request and NMED approval. -Updated Part III, Section 4.0, “Transfer of Covered MTRU Inventory” for CVDs. -Appendix A was split into two tables: A-1 for N3B and A-2 for LANS. -Appendix E was split into two tables: E-1 for N3B and E-2 for LANS. -All tables in Appendix F were reconstructed for better comprehension and purpose. -Table F-1 – removed column “Total FY14 Inventory (above grade on Hold (m^3)” as this information in captured in F-2 and F-4 tables. -Appendix G was split into two tables: G-1 for N3B and G-2 for LANS.
~~Rev 28.0~~	~~STP/CP~~	~~TBD~~	~~Added and deleted volumes reported in FY17 Annual Update~~ ~~On Hold volumes reported shipped in FY14 Annual Update~~ ~~Proposed compliance date for CP Activities 3.1.8-2(A), and 3.3.4-2 (A and B).~~

REFERENCES

1. *Federal Facility Compliance Order (Los Alamos National Laboratory)*, New Mexico Environment Department (October 4, 1995).

2. 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).*

3. 40 CFR 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).