National Nuclear Security Administration
Sandia Site Office
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

APR 0 4 2008

Mr. William P. Moats
FFCO Project Manager
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505

Subject: Proposed Revision No. 12 for the Site Treatment Plan (STP) for Mixed Waste, Compliance Plan Volume (CPV) of the Federal Facility Compliance Order (FFCO) for Sandia National Laboratories, New Mexico New Mexico

Dear Mr. Moats:

The purpose of this letter is to submit our request for a revision to the STP CPV for SNL/NM. The revision request has been prepared for the New Mexico Environment Department (NMED) by the Department of Energy/National Nuclear Security Administration (DOE/NNSA) and Sandia Corporation (Sandia), in accordance with the requirements of Section X. C (Revisions), of the FFCO, as revised and amended. This is proposed Revision No. 12.

In accordance with Section X.B of the FFCO, a revision is required when there is an increase in volume in excess of 10% or greater than one cubic meter in a treatability group (TG) in the Order, whichever is greater (Section X.B.4). Proposed Revision No. 12 will add a total of 21.6 cubic meters (m^3) to the covered waste inventory of TG 25, "Classified Items with TCLP Metals". This requested change to the waste inventory will 1) allow the DOE/NNSA and Sandia to treat this mixed waste in a timely manner, 2) not cause an impact to the environment or public health, and 3) allow the DOE/NNSA and Sandia to realize significant positive impacts on both the overall cost and the operational effectiveness of mixed waste treatment and disposal. This request is discussed in Enclosure A of this proposed revision.

The proposed revision, with information required by the FFCO, Section X. C (Revisions) and Section VIII (Addition of New Covered Waste), is provided in Enclosure A to this letter. The proposed changes to the CPV are provided in Enclosure B, as redline/strikeout, for the NMED's review, comment, and approval. A clean copy of the proposed Revision 12, reflecting the requested changes, is included as Enclosure C. A copy of the proposed CPV text will be provided in both redline/strikeout and clean versions by electronic mail.

As required by the Order, Part XX, "Documents, Information, and Reporting Requirements," Section D, "Certification Statements," the appropriate certification is also provided. If you have any questions regarding this submittal please contact David Rast at 845-5349.

Sincerely,

David Rast
STP Project Manager
NNSA/Sandia Site Office

Sincerely,

James J. Thompson
STP Project Manager
Sandia National Laboratories, New Mexico

Enclosures

cc w/ enclosures:
J. Bearzi, NMED HWB
W. Moats, NMED HWB
T. Skibitski, NMED DOE OB, HWB
A. Blumberg, SNL/NM, Org. 11100, MS-0141
A. Reiser, SNL/NM, Org. 4133, MS-1042
H. Seeley, SNL/NM, Org. 4139, MS-1149
SSO Legal File

CERTIFICATION STATEMENT FOR APPROVAL AND FINAL RELEASE OF DOCUMENTS

Document title: Proposed Revision No. 12 for the Federal Facility Compliance Order, Compliance Plan Volume, for Sandia National Laboratories, New Mexico (SNL/NM)

Document author: Howard Seeley, 04139

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

2 Apr. 2008

Michael W. Hazen, Vice-President Date
Sandia Corporation
Albuquerque, New Mexico
Co-Operator

and

4/4/08

Patty Wagner, Manager Date
U.S. Department of Energy
National Nuclear Security Administration
Sandia Site Office
Owner and Co-Operator

ENCLOSURE A

Proposed Revision No. 12 for the Site Treatment Plan
for Mixed Waste Compliance Plan Volume
of the Federal Facility Compliance Order,
October 4, 1995, as Revised and Amended

ENCLOSURE A

Proposed Revision No. 12 for the Site Treatment Plan (STP) for Mixed Waste Compliance Plan Volume (CPV) of the Federal Facility Compliance Order (FFCO), October 4, 1995, as Revised and Amended

The Department of Energy/National Nuclear Security Administration (DOE/NNSA) and Sandia Corporation (Sandia) are requesting to revise the covered waste inventories for mixed waste listed in the STP CPV for Sandia National Laboratories/New Mexico (SNL/NM). The proposed revision request has been prepared for the New Mexico Environment Department (NMED) in accordance with the requirements of Section X.C, "Revisions", of the FFCO, as revised and amended.

The request for proposed Revision No. 12 is comprised of the addition of newly discovered covered waste to treatability group (TG) 25 (Classified Items with TCLP Metals), in excess of one cubic meter and greater than 10% of the current volume.

Table 4 presents a summary of the treatability groups and the associated volumes reported in the previously approved Revision 11 and as estimated in this proposed Revision No. 12. The estimated volumes reported in this proposed Revision are incorporated in the CPV. The volumes indicated for each TG are based on volumes reported in the FY07 Annual STP.

For the NMED's information and convenience, the proposed revision text for the CPV is provided as Enclosure B (redline/strikeout) and Enclosure C (clean copy). An electronic copy of Enclosure B and Enclosure C is also provided.

ENCLOSURE A

DOE and Sandia STP Proposed Revision
for Addition of New Covered Waste (Section X. B. 5)
Proposed Revision No. 12

The following portions of this enclosure follow the requirements of Section VIII (Addition of New Covered Waste) and Section X (Revisions), of the FFCO, as revised and amended.

Detailed description of the proposed revision (X. C. 2. a)
The DOE and Sandia request a Revision to the CPV for the addition of covered waste, in accordance with Section VIII.A, Amendment No. 3, of the FFCO. The proposed Revision requests that a total volume of 21.6 cubic meters (m^3) of newly discovered covered waste be added to the TG 25 (Classified Items with TCLP Metals) inventories. In accordance with Section VIII.B of the FFCO, information required for covered waste addition is provided in Table 1.

Rationale for the proposed revision (X. C. 2. b)
The Proposed Site Treatment Plan (March 30, 1995) presented the volumes of mixed waste in storage as of September 30, 1994, regardless of its time of generation or state of compliance with the Resource Conservation and Recovery Act (RCRA) 3004[j]. The subsequent additions of covered waste to the inventory were reported in the annual SNL/NM STP Updates. In accordance with Section X.B.5 of the FFCO (Amendment No. 3), a Revision to the CPV is required to include the addition of covered waste to the reported CPV waste inventory if the increase is in excess of 1 cubic meter or 10% of the treatability group volume (X.B.4), whichever is greater. The proposed addition of covered waste to the TG 25 inventory is greater than 1 m^3 and in excess of 10% of the TG 25 volume reported in the FY07 STP Update.

A waste volume of 21.6 m^3 is requested for addition to the TG 25 inventory. This waste consists primarily of classified neutron tubes, transformer tube assemblies, and destructively tested (D-test) debris. Sampling and analysis data indicate that this waste is mixed waste due to lead content. Final characterization of a small portion of this waste volume (e.g., TTAs) has not been completed; however the DOE and Sandia request that the volume be proactively added to expedite future treatment as necessary.

Upon approval of this Revision, the waste volume will be incorporated into the STP and will be subject to the existing CPV activity milestones approved in Revision No. 11. The DOE and Sandia intend to treat the added covered TG 25 waste volume using on-site macroencapsulation followed by shipping the treated waste off-site to the Nevada Test Site. Deletion requests for the treated waste will be submitted to the NMED as required; if the total volume increase requested is not utilized, the excess volume will be removed from inventory in the appropriate annual STP Update.

Waste volume additions that do not meet the definition of a revision to the FFCO, per Section X.B.5, will continue to be reflected in the annual STP Update, in accordance with Section VIII.A.

Anticipated length of delay resulting from the proposed revision including affected compliance dates (X. C. 2. c)
No delays are anticipated.

If delay occurs, implementation of new schedule (X. C. 2. d)
No delays are anticipated.

Description of applicable waste code, waste form, volumes, technology and capacity needs (VIII. B)
Table 1 presents the information required by Section VIII of the FFCO for the addition of new covered waste. Analytical data indicates that lead is the primary contaminant. Should further sampling and analysis data indicate the presence of other toxicity characteristic metals, those RCRA waste codes will be included to characterize the waste.

Schedule for treatment (VIII. B)
All covered waste declared in the proposed Revision request will continue to follow the current treatment schedules in accordance with the CPV.

Table 1
Addition of New Covered Waste

Treatability Group (TG)	Increase in Volume (m^3)	TG Title and Waste Form	Waste Code*	Technology and Capacity Needs	Schedules for Treatment
TG 25	21.6	Classified Items with TCLP Metals	D008	Per CPV	Per CPV

* Should analytical data determine that the waste exhibits additional toxicity characteristic metals, those RCRA waste codes will be included in the characterization and treatment of the waste.

ENCLOSURE A

Table 4 Summary of Treatability Groups and Associated Volumes

TG and Description	**Revision No. 11 Volume**	**Proposed Revision No. 12 Volume[a]**
TG 1 Inorganic Debris with Explosive Component	0 m^3	0 m^3
TG 2 Inorganic Debris with a Water Reactive Component	0 m^3	0.01 m^3
TG 3 Reactive Metals	0 m^3	0 m^3
TG 4 Elemental Lead	0 m^3	0 m^3
TG 5 Aqueous Liquids (Corrosive)	0 m^3	0 m^3
TG 6 Elemental Mercury	0 m^3	0 m^3
TG 7 Organic Liquids I	0 m^3	0 m^3
TG 8 Organic Debris with Organic Contaminants	0 m^3	0 m^3
TG 9 Inorganic Debris with TCLP Metals	0.78 m^3	0.25 m^3
TG 10 Heterogeneous Debris	0.2 m^3	0.1 m^3
TG 11 Organic Liquids II	0 m^3	0 m^3
TG 12 Organic Debris with TCLP Metals	2.2 m^3	0.4 m^3
TG 13 Oxidizers	0 m^3	0 m^3

Continued next page

Table 4 Summary of Treatability Groups and Associated Volumes (concluded)

TG and Description	Revision No. 11 Volume	Proposed Revision No. 12 Volume[a]
TG 14 Aqueous Liquids with Organic Contaminants	0 m^3	0 m^3
TG 15 Soils <50% Debris & Particulates with TCLP Metals	0.35 m^3	0.35 m^3
TG 16 Cyanide Waste	0 m^3	0 m^3
TG 17 Liquid/Solid with Organic and/or Metal Contaminants	0 m^3	0 m^3
TG 18 Soils <50% Debris & Particulates with Organic Contaminants	0 m^3	0 m^3
TG 19 Liquids with Metals	0 m^3	0 m^3
TG 20 Propellant with TCLP Metals	0.004 m^3	0 m^3
TG 21 Sealed Sources with TCLP Metals	0.007 m^3	0 m^3
TG 22 Reserved	Not Applicable	Not Applicable
TG 23 Thermal Batteries	0 m^3	0 m^3
TG 24 Spark Gap Tubes with TCLP Metals	0.05 m^3	0.03 m^3
TG 25 Classified Items with TCLP Metals	5.85 m^3	23.0 m^3
TG 26 Debris Items with Reactive Compounds and TCLP Metals	0 m^3	0 m^3
TG 27 High Mercury Solids and Liquids	0 m^3	0 m^3
MTRU Mixed Transuranic Waste	1.05 m^3	1.33 m^3

[a] Volumes indicated are based on volumes reported in the FY07 Annual STP Update. These volumes may reflect waste volumes that have been treated or re-characterized but have not yet received NMED approval.

ENCLOSURE ~~C~~B

Proposed Revision No. ~~11~~ 12 Text to the Compliance Plan Volume (CPV) of the Federal Facility Compliance Order (FFCO)

~~Clean~~ Redline / Strikeout Version

EXHIBIT A

SANDIA NATIONAL LABORATORIES

MIXED WASTE SITE TREATMENT PLAN

COMPLIANCE PLAN VOLUME (CPV)

BACKGROUND VOLUME

REVISION ~~11~~12

~~June 2007~~April 2008

1.0 PURPOSE AND SCOPE OF THE COMPLIANCE PLAN VOLUME

1.1 INTRODUCTION

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

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

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

1.2 CONTENTS

The STP contains two volumes and is intended to bring Respondents into compliance with LDR storage prohibitions under the HWA and RCRA. The Compliance Plan Volume of the STP provides overall schedules, including compliance dates for achieving compliance with LDR storage and treatment requirements for mixed waste at SNL/NM. The Compliance Plan includes a schedule for the submittal of applications for permits, construction of treatment facilities, technology development, off-site transportation for treatment, and the treatment of mixed wastes in full compliance with the HWA and the implementing regulation at 20 NMAC 4.1, which incorporates by reference 40 CFR Parts 260 through 270. The Background Volume of the STP contains progress reports as required in the Compliance Order. Respondents shall carry out the activities described in the STP, including the Compliance Plan Volume of the STP, in accordance with the schedules and requirements set forth in the STP and the order.

2.0 Compliance Schedules

The STP provides overall schedules for achieving compliance with LDR requirements for mixed waste at SNL/NM. The schedules include those activities required to bring existing waste treatment technologies into operation, process backlogged and currently generated waste, and overall time frames 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 2-1 through 2-6 below. The categories of activities are based on section 3021(b)(1)(B)(I), (ii) and (iii) of RCRA, to the extent appropriate.

2.1.1 Plans Where Treatment Technology Exists

For most of the mixed waste, treatment technologies have been identified and developed. For the waste that will be treated on-site, the categories of compliance dates identified in Table 2-1, "Schedule For Mixed Waste With Existing Treatment Technologies," shall apply. Compliance dates for the activities identified in Table 2-1 may be found in Section 3.1.

Table 2-1 Categories of Activities for Compliance Dates for Mixed Waste With Existing Treatment Technologies

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

2.1.2 Plans Where Treatment Technology Must Be Developed

For some mixed waste, no treatment technologies have been identified and developed, or treatment technology must be modified or adapted to be made applicable for mixed waste. For this waste which will be treated on-site, the categories of compliance dates identified in Table 2-2, "Schedule for Mixed Waste Without Existing Treatment Technologies," shall apply. Compliance dates for the activities identified in Table 2-2 may be found in Section 3.2.

Table 2-2 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 the 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 wastes.
G.	Complete treatment of existing wastes to applicable regulatory standards.

2.1.3 Requirements Pertaining to Radionuclide Separation

The FFC Act sets additional requirements in cases where the DOE/NNSA intends to conduct radionuclide separation of mixed waste. Should the DOE/NNSA determine to conduct radionuclide separation of such mixed waste, the DOE/NNSA will schedule specific compliance dates based on category activities identified in Table 2-3, Schedule for Radionuclide Separation of Mixed Waste. "Radionuclide separation" shall mean the segregation of the radioactive portion of the mixed waste from the hazardous portion of the mixed waste. Compliance dates for the activities identified in Table 2-3 may be found in Section 3.3.

Table 2-3 Categories of Activities for Compliance Dates for Radionuclide Separation of Mixed Waste

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

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

In lieu of plans to treat mixed-waste on-site, DOE/NNSA may send waste to an off-site facility for treatment: a commercial or non-commercial mixed waste treatment facility. Any and all requirements imposed by the off-site facility and state regulatory, federal regulatory or other regulatory requirements applicable to Respondents at the treatment site shall be met by the Respondents.

2.1.4.1 Requirements for Commercial Treatment Facilities

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

Activities for mixed waste to be shipped off-site for treatment at a commercial facility are identified in Table 2-4.

Table 2-4. Activities for Mixed Waste to be Shipped Off-Site for Treatment at a Commercial Facility

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

2.1.4.2 Requirements for Non-commercial Treatment Facilities

DOE/NNSA shall notify the NMED Project Manager in writing as soon as possible if mixed waste is planned to be sent to a non-commercial facility. Notification should be made if possible when DOE/NNSA is first considering such an option to allow NMED and the state to address any state issues or concerns with other states. Documentation shall be provided to NMED of confirmation of shipment date within fourteen (14) working days prior to sending waste to an off-site facility for treatment, disposal or storage pending treatment or disposal. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE/NNSA for each treatability group prior to any shipment by DOE/NNSA. DOE/NNSA will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activities for mixed waste to be shipped off-site for treatment at a non-commercial facility are identified in Table 2-5.

Prior to shipment, the non-commercial treatment facility and their appropriate regulatory agency shall be notified of any pending waste shipments should DOE/NNSA ship mixed waste. Proper procedures including additional approvals (if necessary) and documentation shall be completed prior to the shipment of wastes. Management of post-treatment waste residuals or newly generated waste streams considered hazardous will be in accordance with all applicable local, state, and federal requirements. *A modification to SNL/NM's RCRA permit providing for the return of wastes and/or residuals to SNL/NM must be approved by NMED prior to any such return of wastes and/or residuals to SNL/NM.* DOE/NNSA will notify the NMED Project Manager in writing as soon as possible, and in any event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams.

Shipments of mixed wastes to planned facilities (not yet existing) will occur only after that treatment and schedules are approved by the appropriate DOE/NNSA and state regulatory agency. 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.

Table 2-5. Activities for Mixed Waste to be Shipped Off-Site for Treatment at a Non-commercial Facility

A.	Request necessary approval from NMED for shipment of mixed waste by treatment group 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 mixed waste to an off-site facility for treatment, disposal or storage pending treatment or disposal.
D.	Provide documentation to NMED that mixed waste has been received at an off-site facility for treatment within 45 working days of receipt of waste at the treatment facility.
E.	Meet all regulatory requirements to include RCRA Permit modifications for receipt of residual or newly generated mixed waste streams after treatment that meet the definition of a hazardous waste.
F.	Provide documentation to NMED within 30 working days after receipt of residual or newly generated waste streams upon return to SNL/NM.

2.1.5 Plans for Recycling

Recycling is a parallel preferred option for each preferred treatment technology. Should the DOE/NNSA decide to recycle covered waste, DOE/NNSA will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of the waste at the recycling facility or by the recycler. Activities for mixed waste recycling are identified in Table 2-6. Once a covered waste volume has been recycled or re-used, the DOE/NNSA and Sandia will request a deletion for the covered waste volume.

Table 2-6. Activities for Mixed Waste Recycling

A.	Meet all regulatory requirements for off-site shipment, if applicable.
B.	Provide documentation to NMED that each waste shipment has been received for recycling within 45 working days of receipt of waste by the recycler.

2.1.6 Plans Related to Other Mixed Waste Activities

Activities other than the types of activities specifically called out in the FFC Act as requiring schedules are described in the STP. Some of these activities may be associated with schedules that may contain information related to treatment of the DOE/NNSA's mixed waste, such as:

> 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 as pursuant to the Compliance Order. If such characterization results in the addition or deletion of a treatability group or an increase in volume in a treatability group, a revision would be required pursuant to Section X (Revisions) of the Compliance Order.

3.0 MIXED WASTE TREATMENT PLAN AND SCHEDULES

3.1 Mixed Waste For Which Technology Exists

It is expected that the preferred treatment technology identified in this section as an on-site treatment will be implemented at the SNL/NM Radioactive and Mixed Waste Management Facility (RMWMF) or other appropriate on-site RCRA permitted units. Unless otherwise noted, the DOE/AL Mixed Waste Treatment Plan will be implemented for treatment of the mixed waste at SNL/NM. The DOE/AL Mixed Waste Treatment Plan does not currently adequately address the treatment of some of SNL/NM's specific waste types and is not expected to include or address in updates the treatment of SNL/NM mixed waste in:

- Treatability Group 1 - Inorganic Debris (with an Explosive Component);
- Treatability Group 2- Inorganic Debris (with a Water Reactive Component);
- Treatability Group 3 - Reactive Metals;
- Treatability Group 13 - Oxidizers.

SNL/NM has the responsibility for developing its own on-site application methods of treatment technologies suitable for this mixed waste.

3.1.1 Compliance Dates for Treatability Groups

The activities that require schedules are shown in Tables 2-1 through 2-5. Below are listed each SNL/NM treatability group and the schedule for these activities. Treatability groups with the same treatment and schedule are presented together.

- The schedules for the activities appropriate to SNL/NM from those listed in Table 2-1 for "Categories of Activities for Compliance Dates for Mixed Waste With Existing Treatment Technology, are presented for TGs 1, 2, 3, 4, 5, 6, 8, 9, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 26, and 27;

- The schedules for the activities appropriate to SNL/NM from those listed in Table 2-2 for "Categories of Activities for Compliance Dates for Mixed Waste Without Existing Treatment Technology" are presented for TG 11;

- The schedules for the activities appropriate to SNL/NM from those listed in Table 2-3 for "Categories of Activities for Compliance Dates for Radionuclide Separation of Mixed Waste" are presented for the neutron generator portion of TG 1;

- The schedules for the activities appropriate to SNL/NM from those listed in Table 2-4 and 2-5 for "Activities for Mixed Waste To Be Shipped Off-Site For Treatment" are presented for TGs 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 25, 26, and 27.

- The schedules for the activities appropriate to SNL/NM from those listed in Table 2-6 for "Activities for Mixed Waste Recycling" are presented for TGs 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 25, and 26.

- Other activities are presented with planning schedules for informational purposes for management of TG 10 and Suspect TRU Mixed Waste.

3.1.1.1 Deactivation (On-Site by SNL/NM/Off-Site Treatment/Recycling)

TG 1 - Inorganic Debris with Explosive (0 m^3)

TG 2- Inorganic Debris with Water Reactive (0.01 m^3)

TG 3- Reactive Metals (0 m^3)

The preferred treatment technology for these treatability groups is Deactivation. The neutron generator portion of Treatability Group 1 was disassembled and the hazardous and radioactive portions were managed separately, not as mixed waste. Planning schedules for activities related to the neutron generators are presented in Section 3.3. Shipment off-site for treatment is a parallel preferred option for Deactivation. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Deactivation Schedule

Activity	Compliance Date
A. Submit permit application, amendment or modification to NMED	Completed
B. Initiate set-up of laboratory operation.	Completed
C. Complete system testing and commence operation and begin treating mixed waste.	Completed
D. Complete recycling/treatment of mixed wastes to applicable regulatory standards or,	December 31, 2010
E. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
F. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.2 Macroencapsulation (On-site by SNL/NM/Off-Site Treatment/Recycling)

TG 4 - Elemental Lead (0 m3)

TG 9 - Inorganic Debris with TCLP Metals (~~0.78~~0.25 m3)

TG 12- Organic Debris with TCLP Metals (~~2.2~~0.4 m3)

The preferred treatment technology for each of these treatability groups is Macroencapsulation. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste at an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Macroencapsulation Schedule

Activity	Compliance Date
A. Submit permit application, amendment, or modification to NMED	Completed
B. Complete recycling/treatment of mixed waste to applicable regulatory standards or, complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
C. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.3 Neutralization followed-by Stabilization (On-Site by SNL/NM/Off-Site Treatment/Recycling)

TG 5 - Aqueous Liquids (0 m^3)

The preferred treatment technology for this treatability group is Neutralization followed by Stabilization. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with Section **2.1.5 Plans for Recycling.**

Neutralization followed by Stabilization Schedule

Activity	Compliance Date
A. Submit permit application, amendment or modification to NMED	Completed
B. Initiate set-up of laboratory operation.	Completed
C. Complete system testing and commence operation and begin treating mixed waste.	Completed
D. Complete recycling/treatment of mixed wastes to applicable regulatory standards or,	December 31, 2010
E. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
F. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.4 Amalgamation (On-Site by SNL/NM/Off-Site Treatment/Recycling)

TG 6 - Elemental Mercury (0 m^3)

The preferred treatment technology for this treatability group is Amalgamation. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Amalgamation Schedule

Activity	Compliance Date
A. Submit permit application, amendment or modification to NMED	Completed
B. Complete recycling/treatment of mixed wastes to applicable regulatory standards or,	December 31, 2010
C. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
D. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.5 Incineration (Off-Site by Treatment Facility/Recycling)

TG 7 - Organic Liquids I (0 m^3)

TG 18 – Particulates and Soils with Organic Contaminants (0 m^3)

The preferred treatment technology for these treatability groups is Incineration at an off-site facility. Should DOE/NNSA decide to send waste to an off-site facility for treatment, the DOE/NNSA shall act in accordance with Section **2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Incineration Schedule

Activity	Compliance Date
A. Complete shipping of wastes to an off-site treatment/recycling facility.	December 31, 2010
B. Provide documentation to NMED that waste was received at off-site facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.6 Thermal Desorption (Off-Site Treatment/Recycling)

TG 8 - Organic Debris (0 m^3)

The preferred treatment technology for this treatability group is Thermal Desorption. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Thermal Desorption Schedule

Activity	Compliance Date
A. Submit permit application, amendment or modification to NMED	Completed
B. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
C. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.7 Deactivation followed by Stabilization (On-Site by SNL/NM/Off-Site Treatment/Recycling)

TG 13 - Oxidizers (0 m^3)

TG 20 – Propellant with TCLP Metals (~~0.004~~ m^3)

The preferred treatment technology for this treatability group is Deactivation followed by Stabilization. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Deactivation followed by Stabilization Schedule

Activity	Compliance Date
A. Submit permit application, amendment or modification to NMED	Completed
B. Initiate set-up of laboratory operation.	Completed
C. Complete system testing and commence operation and begin treating mixed waste.	Completed
D. Complete recycling/treatment to applicable regulatory standards, or shipping of wastes to an off-site	December 31, 2010

treatment/recycling facility	
E. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.8 Evaporative Oxidation (Off-Site Treatment/Recycling)

TG 14 - Aqueous Liquids with Organic Contaminants (0 m^3)

The preferred treatment technology for this treatability group is Evaporative Oxidation. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Evaporative Oxidation Schedule

Activity	Compliance Date
A. Submit permit application, amendment or modification to NMED	Completed
B. Complete recycling/treatment of mixed wastes to applicable regulatory standards or,	December 31, 2010
C. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
D. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.9 Stabilization (On-Site by SNL/NM/Off-Site Treatment/Recycling)

TG 15 - Soils <50% Debris & Particulates with TCLP Metals (0.35 m^3)

TG 19 - Liquids with Metals (0 m^3)

The preferred treatment technology for this treatability group is Stabilization. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the shipments shall be managed in accordance with **Section 2.1.4, Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Stabilization Schedule

Activity	Compliance Date
A. Initiate set-up of laboratory operation	Obtain new permit or modify or amend existing NMED permit if required
B. Complete systems testing and commence operation and begin treating mixed waste.	Completed
C. Complete recycling/treatment of mixed wastes to applicable regulatory standards or,	December 31, 2010
D. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
E. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.10 Oxidation (On-Site by SNL/NM/Off-Site Treatment/Recycling)

TG 16 - Cyanide Waste (0 m^3)

The preferred treatment technology for this treatability group is Oxidation. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Oxidation Schedule

Activity	Compliance Date
A. Submit permit application, amendment or modification to NMED	Completed
B. Complete recycling/treatment of mixed wastes to applicable regulatory standards or,	December 31, 2010
C. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
D. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.11 Incineration followed by Stabilization (Off-Site Treatment/Recycling)

TG 17 - Liquid/Solid with Organic and/or Metal Contaminants (0 m^3)

The preferred treatment technology for this treatability group is Incineration followed by Stabilization, as required, at an off-site treatment facility. Stabilization is required for the treatment of waste that contains metals contamination. Prior to sending waste to an off-site facility for treatment, the DOE/NNSA shall act in compliance with **Section 2.1.4, Plans for Mixed Waste to be Shipped Off-site for Treatment**.

Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Incineration/Stabilization Schedule

Activity	Compliance Date
A. Complete treatment to applicable regulatory standards or shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
B. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.12 Off-Site Shipment / Macroencapsulation Pending Disposal

TG 21 – Sealed Sources with TCLP Metals (0~~.007~~ m^3)

TG 24 – Spark Gap Tubes with TCLP Metals (0.~~05~~ m^3)

TG 26 – Debris Items with Reactive Compounds and TCLP Metals (0 m^3)

The preferred treatment technology for this treatability group is shipment to an off-site facility for treatment and disposal. Prior to sending waste to an off-site facility for treatment, the DOE/NNSA shall act in compliance with **Section 2.1.4, Plans for Mixed Waste to be Shipped Off-site for Treatment**. Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

A parallel treatment option may be on-site macroencapsulation followed by storage pending development of further treatment and disposal options.

Off-site Shipment / Macroencapsulation Pending Disposal Schedule

Activity	Compliance Date
A. Provide progress report of current status and availability of treatment and/or disposal options	Completed
B. Complete on-site macroencapsulation of waste and commence storage pending disposal, or	December 31, 2010
C. Complete shipping of wastes to an off-site treatment/recycling facility and	December 31, 2010
D. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.13 Size Reduction followed by Stabilization

TG 23 - Thermal Batteries (0 m^3)

The preferred treatment technology for this treatability group is stabilization at an off-site treatment facility. Prior to sending waste to an off-site facility for treatment, the DOE/NNSA shall act in compliance with **Section 2.1.4, Plans for Mixed Waste to be Shipped Off-site for Treatment**. Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Stabilization Schedule

Activity	Compliance Date
A. Render existing thermal batteries non-reactive	Completed
B. Provide progress report of current status and availability of treatment and/or disposal options	Completed
C. Complete shipping of wastes to an off-site treatment/recycling facility and	December 31, 2010
D. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.2 Mixed Waste For Which Technology Must Be Developed

SNL/NM has treatability groups for which the preferred treatment option is a treatment technology that requires adaptation in order to treat hazardous waste that is radioactive and may contain PCBs or high levels of mercury.

3.2.1 Hydrothermal Processing (On-Site by SNL/NM/Off-Site Treatment/Recycling)

TG 11 - Organic Liquids II (0 m^3)

Hydrothermal processing was identified in the Site Treatment Plan as the preferred treatment technology for TG 11 Organic Liquids II. Development of hydrothermal processing as a treatment technology adaptable to a mobile treatment unit configuration has since been eliminated by the DOE/AL. In its place, the DOE/AL proposed the development of a mobile Packed Bed Reactor with a Silent Discharge Plasma unit. A bench-scale treatability study and a conceptual design of a full-scale PBR/SDP MTU was completed. However, further development of the PBR/SDP has also been placed on indefinite hold by the DOE/AL. As required by the CPV, respondents submitted treatment schedules and options for the NMED's approval prior to the compliance date of November 30, 1998. The treatment schedule submitted reflected the approval by the NMED for off-site shipment (Revision No. 1) and the approval of February 28, 2001, as an initial compliance date for shipments (Revision No. 2).

Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment**. Off-site

shipments must be completed by December 31, 2010. Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

3.2.2 Stabilization of High Mercury Materials (On-site/Off-Site Treatment)

TG 27 - High Mercury Solids and Liquids (0 m^3)

The technology-based treatment standard for high mercury solids and oils is incineration (IMERC) or retorting and recovery (RMERC). These technologies have not been available for mixed waste. If they are not available, the DOE/NNSA intends to petition the NMED for a variance from the LDR treatment standard to allow on-site stabilization to be utilized to treat this waste. The parallel treatment technology for this treatability group is shipment to an off-site treatment facility. Prior to sending waste to an off-site facility for treatment, the DOE/NNSA shall act in compliance with **Section 2.1.4, Plans for Mixed Waste to be Shipped Off-site for Treatment**. Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

High Mercury Solids and Liquids Schedule

Activity	Compliance Date
A. Provide progress report of current status and availability of treatment and/or disposal options	Completed
B. Complete recycling/treatment of wastes to applicable regulatory standards or,	December 31, 2010
C. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
D. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.3 Other Types of Mixed Waste Activities

This section describes activities that will be performed to reduce the mixed waste in inventory at SNL/NM.

3.3.1 Sorting of Heterogeneous Debris

TG 10 - Heterogeneous Debris (~~0.2~~0.1 m^3)

This treatability group contains a heterogeneous assortment of debris. Therefore, the treatability group requires sorting the waste into, for example, organic and inorganic debris treatability groups (TG8 and TG9), or other treatability groups as appropriate for which preferred treatment options have been selected or will be selected according to the methodology described in the DOE/AL Mixed Waste Treatment Plan. The sorting process began on June 30, 1995.

Shipment off-site for treatment is a preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment**. Sorting activities for mixed waste items added to the STP inventory in accordance with the order (Amendment No. 3 or Revision process) will be completed by December 31, 2010. Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

TG 25 - Classified Items with TCLP Metals (~~5.85~~23.0 m^3)

This treatability group contains a heterogeneous assortment of classified items and debris. As such, this treatability group requires sorting the waste into other treatability groups as appropriate for which preferred treatment options have been selected. The sorting process may include, but not be limited to, physical sorting, separation, disassembly, and/or de-classification.

Shipment off-site for treatment and/or disposal is the preferred option, however there is currently no disposal facility that can accept classified mixed waste. The parallel preferred treatment option is on-site treatment by macroencapsulation followed by storage pending the development of further treatment and disposal options. Sorting and/or de-classification activities may be necessary to process the classified mixed waste into items suitable for further treatment on-site or shipment off-site to treatment and/or disposal facilities. Sorting or on-site treatment activities for classified mixed waste items will be completed by December 31, 2010. Should DOE/NNSA send waste to an off-site facility for treatment, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment**. Off-site shipments will be completed by December 31, 2010. Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

3.3.2 Mixed Waste For Which Radionuclide Separation is Planned

Treatability Group 1, Inorganic Debris with Explosive Component neutron generators. These items will be disassembled to yield waste streams that are not mixed. The radioactive portion of the assembled items will be physically separated from the explosive portion.

Radionuclide Separation Schedule (On-Site by SNL)

Activity	Compliance Date
A. Complete an estimate of the volume of waste generated by each case of radionuclide separation.	Completed
B. Complete an estimate of the volume of waste that would exist or be generated without radionuclide separation.	Completed
C. Complete an estimate of the costs of waste treatment and disposal if radionuclide separation is used compared to the estimated costs if it is not used.	Completed
D. Provide the assumptions underlying such waste volume and cost estimates.	Completed
E. Provide characterization methodologies for determining waste types	Completed
F. Submit a plan for treatment or	Completed

management of hazardous waste residues as appropriate.	

4.0 MIXED TRU WASTE (~~1.05~~1.33 m^3)

Treatment Group(s):

Assorted Mixed Transuranic Waste

Treatment Technology:

Respondents are required to treat mixed transuranic (MTRU) waste at SNL/NM according to the schedule set forth below:

Activity	Compliance Date
A. Development of treatment technology	Completed
B. Submit permit application amendment, or modification to NMED for treatment of MTRU waste	Completed
C. Complete preparation of existing MTRU wastes for shipment to an off-site certifying facility	Within three (3) years after a) the applicable state's approval of the certifying facility's revised RCRA permit allowing them to receive SNL/NM waste b) the certifying facility is certified by WIPP for heterogeneous and/or homogeneous MTRU waste, as applicable, and c) the certifying facility's waste acceptance criteria are met.
D. Complete shipping of existing MTRU waste to an off-site facility for certification and disposal at the WIPP facility	December 31, 2010
E. Provide documentation to NMED that MTRU waste was received at off-site certifying facility	Within 45 working days of receipt of waste at certifying facility

The above schedule is based on the assumption that WIPP will be a disposal option or that DOE/NNSA will receive a variance from treatment standards for land disposal of MTRU waste to be disposed at WIPP. All revisions to compliance dates shall be in accordance with the procedures set forth in the compliance order.

Proposed Revision ~~11~~12

Table 4 - Summary of Treatability Groups and Associated Volumes

TG and Description	**Revision No. ~~10~~ 11 Volume**	**Proposed Revision No. ~~11~~ 12 Volume[a]**
TG 1 Inorganic Debris with Explosive Component	0 m^3	0 m^3
TG 2 Inorganic Debris with a Water Reactive Component	0 m^3	~~0~~ 0.01 m^3
TG 3 Reactive Metals	0 m^3	0 m^3
TG 4 Elemental Lead	0 m^3	0 m^3
TG 5 Aqueous Liquids (Corrosive)	0 m^3	0 m^3
TG 6 Elemental Mercury	0 m^3	0 m^3
TG 7 Organic Liquids I	0 m^3	0 m^3
TG 8 Organic Debris with Organic Contaminants	0 m^3	0 m^3
TG 9 Inorganic Debris with TCLP Metals	~~0.003~~0.78 m^3	~~0.78~~0.25 m^3
TG 10 Heterogeneous Debris	0.2 m^3	~~0.2~~0.1 m^3
TG 11 Organic Liquids II	0 m^3	0 m^3
TG 12 Organic Debris with TCLP Metals	~~1.6~~2.2 m^3	~~2.2~~0.4 m^3
TG 13 Oxidizers	0 m^3	0 m^3
TG 14 Aqueous Liquids with Organic Contaminants	0 m^3	0 m^3

Table 4 - Summary of Treatability Groups and Associated Volumes (Concluded)

TG and Description	**Revision No. ~~10~~ 11 Volume**	**Proposed Revision No. ~~11~~ 12 Volume[a]**
TG 15 Soils <50% Debris & Particulates with TCLP Metals	~~0~~ 0.35 m^3	0.35 m^3
TG 16 Cyanide Waste	0 m^3	0 m^3
TG 17 Liquid/Solid with Organic and/or Metal Contaminants	~~0.04~~0 m^3	0 m^3
TG 18 Soils <50% Debris & Particulates with Organic Contaminants	0 m^3	0 m^3
TG 19 Liquids with Metals	0 m^3	0 m^3
TG 20 Propellant with TCLP Metals	~~1.0~~0.004 m^3	0~~.004~~ m^3
TG 21 Sealed Sources with TCLP Metals	0.007 m^3	0~~.007~~ m^3
TG 22 Reserved	Not Applicable	Not Applicable
TG 23 Thermal Batteries	0 m^3	0 m^3
TG 24 Spark Gap Tubes with TCLP Metals	~~0.02~~0.05 m^3	~~0.05~~0.03 m^3
TG 25 Classified Items with TCLP Metals	~~8.6~~5.85 m^3	~~5.85~~23.0 m^3
TG 26 Debris Items with Reactive Compounds and TCLP Metals	0 m^3	0 m^3
TG 27 High Mercury Solids and Liquids	0 m^3	0 m^3
MTRU Mixed Transuranic Waste	1.05 m^3	~~1.05~~1.33 m^3

[a] Volumes indicated are based on volumes reported in the FY0~~7~~6 Annual STP Update. These volumes reflect waste volumes that have been treated or re-characterized but have not yet received NMED approval.

ENCLOSURE C

Proposed Revision No. 12 Text to the Compliance Plan Volume (CPV) of the Federal Facility Compliance Order (FFCO)

Clean Version

EXHIBIT A

SANDIA NATIONAL LABORATORIES

MIXED WASTE SITE TREATMENT PLAN

COMPLIANCE PLAN VOLUME (CPV)

BACKGROUND VOLUME

REVISION 12

April 2008

1.0 PURPOSE AND SCOPE OF THE COMPLIANCE PLAN VOLUME

1.1 INTRODUCTION

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

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

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

1.2 CONTENTS

The STP contains two volumes and is intended to bring Respondents into compliance with LDR storage prohibitions under the HWA and RCRA. The Compliance Plan Volume of the STP provides overall schedules, including compliance dates for achieving compliance with LDR storage and treatment requirements for mixed waste at SNL/NM. The Compliance Plan includes a schedule for the submittal of applications for permits, construction of treatment facilities, technology development, off-site transportation for treatment, and the treatment of mixed wastes in full compliance with the HWA and the implementing regulation at 20 NMAC 4.1, which incorporates by reference 40 CFR Parts 260 through 270. The Background Volume of the STP contains progress reports as required in the Compliance Order. Respondents shall carry out the activities described in the STP, including the Compliance Plan Volume of the STP, in accordance with the schedules and requirements set forth in the STP and the order.

2.0 Compliance Schedules

The STP provides overall schedules for achieving compliance with LDR requirements for mixed waste at SNL/NM. The schedules include those activities required to bring existing waste treatment technologies into operation, process backlogged and currently generated waste, and overall time frames 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 2-1 through 2-6 below. The categories of activities are based on section 3021(b)(1)(B)(I), (ii) and (iii) of RCRA, to the extent appropriate.

2.1.1 Plans Where Treatment Technology Exists

For most of the mixed waste, treatment technologies have been identified and developed. For the waste that will be treated on-site, the categories of compliance dates identified in Table 2-1, "Schedule For Mixed Waste With Existing Treatment Technologies," shall apply. Compliance dates for the activities identified in Table 2-1 may be found in Section 3.1.

Table 2-1 Categories of Activities for Compliance Dates for Mixed Waste With Existing Treatment Technologies

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

2.1.2 Plans Where Treatment Technology Must Be Developed

For some mixed waste, no treatment technologies have been identified and developed, or treatment technology must be modified or adapted to be made applicable for mixed waste. For this waste which will be treated on-site, the categories of compliance dates identified in Table 2-2, "Schedule for Mixed Waste Without Existing Treatment Technologies," shall apply. Compliance dates for the activities identified in Table 2-2 may be found in Section 3.2.

Table 2-2 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 the 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 wastes.
G.	Complete treatment of existing wastes to applicable regulatory standards.

2.1.3 Requirements Pertaining to Radionuclide Separation

The FFC Act sets additional requirements in cases where the DOE/NNSA intends to conduct radionuclide separation of mixed waste. Should the DOE/NNSA determine to conduct radionuclide separation of such mixed waste, the DOE/NNSA will schedule specific compliance dates based on category activities identified in Table 2-3, Schedule for Radionuclide Separation of Mixed Waste. "Radionuclide separation" shall mean the segregation of the radioactive portion of the mixed waste from the hazardous portion of the mixed waste. Compliance dates for the activities identified in Table 2-3 may be found in Section 3.3.

Table 2-3 Categories of Activities for Compliance Dates for Radionuclide Separation of Mixed Waste

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

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

In lieu of plans to treat mixed-waste on-site, DOE/NNSA may send waste to an off-site facility for treatment: a commercial or non-commercial mixed waste treatment facility. Any and all requirements imposed by the off-site facility and state regulatory, federal regulatory or other regulatory requirements applicable to Respondents at the treatment site shall be met by the Respondents.

2.1.4.1 Requirements for Commercial Treatment Facilities

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

Activities for mixed waste to be shipped off-site for treatment at a commercial facility are identified in Table 2-4.

Table 2-4. Activities for Mixed Waste to be Shipped Off-Site for Treatment at a Commercial Facility

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

2.1.4.2 Requirements for Non-commercial Treatment Facilities

DOE/NNSA shall notify the NMED Project Manager in writing as soon as possible if mixed waste is planned to be sent to a non-commercial facility. Notification should be made if possible when DOE/NNSA is first considering such an option to allow NMED and the state to address any state issues or concerns with other states. Documentation shall be provided to NMED of confirmation of shipment date within fourteen (14) working days prior to sending waste to an off-site facility for treatment, disposal or storage pending treatment or disposal. The NMED Project Manager shall approve in writing the off-site non-commercial treatment option proposed by DOE/NNSA for each treatability group prior to any shipment by DOE/NNSA. DOE/NNSA will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of waste at the treatment facility.

Activities for mixed waste to be shipped off-site for treatment at a non-commercial facility are identified in Table 2-5.

Prior to shipment, the non-commercial treatment facility and their appropriate regulatory agency shall be notified of any pending waste shipments should DOE/NNSA ship mixed waste. Proper procedures including additional approvals (if necessary) and documentation shall be completed prior to the shipment of wastes. Management of post-treatment waste residuals or newly generated waste streams considered hazardous will be in accordance with all applicable local, state, and federal requirements. *A modification to SNL/NM's RCRA permit providing for the return of wastes and/or residuals to SNL/NM must be approved by NMED prior to any such return of wastes and/or residuals to SNL/NM.* DOE/NNSA will notify the NMED Project Manager in writing as soon as possible, and in any event within thirty (30) working days after receipt of shipment of treatment residuals or newly generated waste streams.

Shipments of mixed wastes to planned facilities (not yet existing) will occur only after that treatment and schedules are approved by the appropriate DOE/NNSA and state regulatory agency. 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.

Table 2-5. Activities for Mixed Waste to be Shipped Off-Site for Treatment at a Non-commercial Facility

A.	Request necessary approval from NMED for shipment of mixed waste by treatment group 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 mixed waste to an off-site facility for treatment, disposal or storage pending treatment or disposal.
D.	Provide documentation to NMED that mixed waste has been received at an off-site facility for treatment within 45 working days of receipt of waste at the treatment facility.
E.	Meet all regulatory requirements to include RCRA Permit modifications for receipt of residual or newly generated mixed waste streams after treatment that meet the definition of a hazardous waste.
F.	Provide documentation to NMED within 30 working days after receipt of residual or newly generated waste streams upon return to SNL/NM.

2.1.5 Plans for Recycling

Recycling is a parallel preferred option for each preferred treatment technology. Should the DOE/NNSA decide to recycle covered waste, DOE/NNSA will notify the NMED Project Manager in writing as soon as possible and in any event within forty-five (45) working days of receipt of the waste at the recycling facility or by the recycler. Activities for mixed waste recycling are identified in Table 2-6. Once a covered waste volume has been recycled or re-used, the DOE/NNSA and Sandia will request a deletion for the covered waste volume.

Table 2-6. Activities for Mixed Waste Recycling

A.	Meet all regulatory requirements for off-site shipment, if applicable.
B.	Provide documentation to NMED that each waste shipment has been received for recycling within 45 working days of receipt of waste by the recycler.

2.1.6 Plans Related to Other Mixed Waste Activities

Activities other than the types of activities specifically called out in the FFC Act as requiring schedules are described in the STP. Some of these activities may be associated with schedules that may contain information related to treatment of the DOE/NNSA's mixed waste, such as:

> 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 as pursuant to the Compliance Order. If such characterization results in the addition or deletion of a treatability group or an increase in volume in a treatability group, a revision would be required pursuant to Section X (Revisions) of the Compliance Order.

3.0 MIXED WASTE TREATMENT PLAN AND SCHEDULES

3.1 Mixed Waste For Which Technology Exists

It is expected that the preferred treatment technology identified in this section as an on-site treatment will be implemented at the SNL/NM Radioactive and Mixed Waste Management Facility (RMWMF) or other appropriate on-site RCRA permitted units. Unless otherwise noted, the DOE/AL Mixed Waste Treatment Plan will be implemented for treatment of the mixed waste at SNL/NM. The DOE/AL Mixed Waste Treatment Plan does not currently adequately address the treatment of some of SNL/NM's specific waste types and is not expected to include or address in updates the treatment of SNL/NM mixed waste in:

- Treatability Group 1 - Inorganic Debris (with an Explosive Component);
- Treatability Group 2- Inorganic Debris (with a Water Reactive Component);
- Treatability Group 3 - Reactive Metals;
- Treatability Group 13 - Oxidizers.

SNL/NM has the responsibility for developing its own on-site application methods of treatment technologies suitable for this mixed waste.

3.1.1 Compliance Dates for Treatability Groups

The activities that require schedules are shown in Tables 2-1 through 2-5. Below are listed each SNL/NM treatability group and the schedule for these activities. Treatability groups with the same treatment and schedule are presented together.

- The schedules for the activities appropriate to SNL/NM from those listed in Table 2-1 for "Categories of Activities for Compliance Dates for Mixed Waste With Existing Treatment Technology, are presented for TGs 1, 2, 3, 4, 5, 6, 8, 9, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 26, and 27;

- The schedules for the activities appropriate to SNL/NM from those listed in Table 2-2 for "Categories of Activities for Compliance Dates for Mixed Waste Without Existing Treatment Technology" are presented for TG 11;

- The schedules for the activities appropriate to SNL/NM from those listed in Table 2-3 for "Categories of Activities for Compliance Dates for Radionuclide Separation of Mixed Waste" are presented for the neutron generator portion of TG 1;

- The schedules for the activities appropriate to SNL/NM from those listed in Table 2-4 and 2-5 for "Activities for Mixed Waste To Be Shipped Off-Site For Treatment" are presented for TGs 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 25, 26, and 27.

- The schedules for the activities appropriate to SNL/NM from those listed in Table 2-6 for "Activities for Mixed Waste Recycling" are presented for TGs 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 25, and 26.

- Other activities are presented with planning schedules for informational purposes for management of TG 10 and Suspect TRU Mixed Waste.

3.1.1.1 Deactivation (On-Site by SNL/NM/Off-Site Treatment/Recycling)

TG 1 - Inorganic Debris with Explosive (0 m^3)

TG 2- Inorganic Debris with Water Reactive (0.01 m^3)

TG 3- Reactive Metals (0 m^3)

The preferred treatment technology for these treatability groups is Deactivation. The neutron generator portion of Treatability Group 1 was disassembled and the hazardous and radioactive portions were managed separately, not as mixed waste. Planning schedules for activities related to the neutron generators are presented in Section 3.3. Shipment off-site for treatment is a parallel preferred option for Deactivation. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Deactivation Schedule

Activity	Compliance Date
A. Submit permit application, amendment or modification to NMED	Completed
B. Initiate set-up of laboratory operation.	Completed
C. Complete system testing and commence operation and begin treating mixed waste.	Completed
D. Complete recycling/treatment of mixed wastes to applicable regulatory standards or,	December 31, 2010
E. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
F. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.2 Macroencapsulation (On-site by SNL/NM/Off-Site Treatment/Recycling)

TG 4 - Elemental Lead (0 m3)

TG 9 - Inorganic Debris with TCLP Metals (0.25 m3)

TG 12 - Organic Debris with TCLP Metals (0.4 m3)

The preferred treatment technology for each of these treatability groups is Macroencapsulation. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste at an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Macroencapsulation Schedule

Activity	Compliance Date
A. Submit permit application, amendment, or modification to NMED	Completed
B. Complete recycling/treatment of mixed waste to applicable regulatory standards or, complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
C. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.3 Neutralization followed-by Stabilization (On-Site by SNL/NM/Off-Site Treatment/Recycling)

TG 5 - Aqueous Liquids (0 m^3)

The preferred treatment technology for this treatability group is Neutralization followed by Stabilization. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with Section **2.1.5 Plans for Recycling.**

Neutralization followed by Stabilization Schedule

Activity	Compliance Date
A. Submit permit application, amendment or modification to NMED	Completed
B. Initiate set-up of laboratory operation.	Completed
C. Complete system testing and commence operation and begin treating mixed waste.	Completed
D. Complete recycling/treatment of mixed wastes to applicable regulatory standards or,	December 31, 2010
E. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
F. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.4 Amalgamation (On-Site by SNL/NM/Off-Site Treatment/Recycling)

TG 6 - Elemental Mercury (0 m^3)

The preferred treatment technology for this treatability group is Amalgamation. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Amalgamation Schedule

Activity	Compliance Date
A. Submit permit application, amendment or modification to NMED	Completed
B. Complete recycling/treatment of mixed wastes to applicable regulatory standards or,	December 31, 2010
C. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
D. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.5 Incineration (Off-Site by Treatment Facility/Recycling)

TG 7 - Organic Liquids I (0 m^3)

TG 18 - Particulates and Soils with Organic Contaminants (0 m^3)

The preferred treatment technology for these treatability groups is Incineration at an off-site facility. Should DOE/NNSA decide to send waste to an off-site facility for treatment, the DOE/NNSA shall act in accordance with Section **2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Incineration Schedule

Activity	Compliance Date
A. Complete shipping of wastes to an off-site treatment/recycling facility.	December 31, 2010
B. Provide documentation to NMED that waste was received at off-site facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.6 Thermal Desorption (Off-Site Treatment/Recycling)

TG 8 - Organic Debris (0 m^3)

The preferred treatment technology for this treatability group is Thermal Desorption. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Thermal Desorption Schedule

Activity	Compliance Date
A. Submit permit application, amendment or modification to NMED	Completed
B. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
C. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.7 Deactivation followed by Stabilization (On-Site by SNL/NM/Off-Site Treatment/Recycling)

TG 13 - Oxidizers (0 m^3)

TG 20 - Propellant with TCLP Metals (0 m^3)

The preferred treatment technology for this treatability group is Deactivation followed by Stabilization. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Deactivation followed by Stabilization Schedule

Activity	Compliance Date
A. Submit permit application, amendment or modification to NMED	Completed
B. Initiate set-up of laboratory operation.	Completed
C. Complete system testing and commence operation and begin treating mixed waste.	Completed
D. Complete recycling/treatment to applicable regulatory standards, or shipping of wastes to an off-site treatment/recycling facility	December 31, 2010

E. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.8 Evaporative Oxidation (Off-Site Treatment/Recycling)

TG 14 - Aqueous Liquids with Organic Contaminants (0 m^3)

The preferred treatment technology for this treatability group is Evaporative Oxidation. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Evaporative Oxidation Schedule

Activity	Compliance Date
A. Submit permit application, amendment or modification to NMED	Completed
B. Complete recycling/treatment of mixed wastes to applicable regulatory standards or,	December 31, 2010
C. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
D. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.9 Stabilization (On-Site by SNL/NM/Off-Site Treatment/Recycling)

TG 15 - Soils <50% Debris & Particulates with TCLP Metals (0.35 m^3)

TG 19 - Liquids with Metals (0 m^3)

The preferred treatment technology for this treatability group is Stabilization. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the shipments shall be managed in accordance with **Section 2.1.4, Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Stabilization Schedule

Activity	**Compliance Date**
A. Initiate set-up of laboratory operation	Obtain new permit or modify or amend existing NMED permit if required

B. Complete systems testing and commence operation and begin treating mixed waste.	Completed
C. Complete recycling/treatment of mixed wastes to applicable regulatory standards or,	December 31, 2010
D. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
E. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.10 Oxidation (On-Site by SNL/NM/Off-Site Treatment/Recycling)

TG 16 - Cyanide Waste (0 m^3)

The preferred treatment technology for this treatability group is Oxidation. Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment.** Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Oxidation Schedule

Activity	Compliance Date
A. Submit permit application, amendment or modification to NMED	Completed
B. Complete recycling/treatment of mixed wastes to applicable regulatory standards or,	December 31, 2010
C. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
D. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.11 Incineration followed by Stabilization (Off-Site Treatment/Recycling)

TG 17 - Liquid/Solid with Organic and/or Metal Contaminants (0 m^3)

The preferred treatment technology for this treatability group is Incineration followed by Stabilization, as required, at an off-site treatment facility. Stabilization is required for the treatment of waste that contains metals contamination. Prior to sending waste to an off-site facility for treatment, the DOE/NNSA shall act in compliance with **Section 2.1.4, Plans for Mixed Waste to be Shipped Off-site for Treatment**. Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Incineration/Stabilization Schedule

Activity	Compliance Date
A. Complete treatment to applicable regulatory standards or shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
B. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.12 Off-Site Shipment / Macroencapsulation Pending Disposal

TG 21 - Sealed Sources with TCLP Metals (0 m^3)

TG 24 - Spark Gap Tubes with TCLP Metals (0.03 m^3)

TG 26 - Debris Items with Reactive Compounds and TCLP Metals (0 m^3)

The preferred treatment technology for this treatability group is shipment to an off-site facility for treatment and disposal. Prior to sending waste to an off-site facility for treatment, the DOE/NNSA shall act in compliance with **Section 2.1.4, Plans for Mixed Waste to be Shipped Off-site for Treatment**. Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

A parallel treatment option may be on-site macroencapsulation followed by storage pending development of further treatment and disposal options.

Off-site Shipment / Macroencapsulation Pending Disposal Schedule

Activity	Compliance Date
A. Provide progress report of current status and availability of treatment and/or disposal options	Completed
B. Complete on-site macroencapsulation of waste and commence storage pending disposal, or	December 31, 2010
C. Complete shipping of wastes to an off-site treatment/recycling facility and	December 31, 2010
D. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.1.1.13 Size Reduction followed by Stabilization

TG 23 - Thermal Batteries (0 m^3)

The preferred treatment technology for this treatability group is stabilization at an off-site treatment facility. Prior to sending waste to an off-site facility for treatment, the DOE/NNSA shall act in compliance with **Section 2.1.4, Plans for Mixed Waste to be Shipped Off-site for Treatment**. Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

Stabilization Schedule

Activity	Compliance Date
A. Render existing thermal batteries non-reactive	Completed
B. Provide progress report of current status and availability of treatment and/or disposal options	Completed
C. Complete shipping of wastes to an off-site treatment/recycling facility and	December 31, 2010
D. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.2 Mixed Waste For Which Technology Must Be Developed

SNL/NM has treatability groups for which the preferred treatment option is a treatment technology that requires adaptation in order to treat hazardous waste that is radioactive and may contain PCBs or high levels of mercury.

3.2.1 Hydrothermal Processing (On-Site by SNL/NM/Off-Site Treatment/Recycling)

TG 11 - Organic Liquids II (0 m^3)

Hydrothermal processing was identified in the Site Treatment Plan as the preferred treatment technology for TG 11 Organic Liquids II. Development of hydrothermal processing as a treatment technology adaptable to a mobile treatment unit configuration has since been eliminated by the DOE/AL. In its place, the DOE/AL proposed the development of a mobile Packed Bed Reactor with a Silent Discharge Plasma unit. A bench-scale treatability study and a conceptual design of a full-scale PBR/SDP MTU was completed. However, further development of the PBR/SDP has also been placed on indefinite hold by the DOE/AL. As required by the CPV, respondents submitted treatment schedules and options for the NMED's approval prior to the compliance date of November 30, 1998. The treatment schedule submitted reflected the approval by the NMED for off-site shipment (Revision No. 1) and the approval of February 28, 2001, as an initial compliance date for shipments (Revision No. 2).

Shipment off-site for treatment is a parallel preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment**. Off-site

shipments must be completed by December 31, 2010. Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

3.2.2 Stabilization of High Mercury Materials (On-site/Off-Site Treatment)

TG 27 - High Mercury Solids and Liquids (0 m^3)

The technology-based treatment standard for high mercury solids and oils is incineration (IMERC) or retorting and recovery (RMERC). These technologies have not been available for mixed waste. If they are not available, the DOE/NNSA intends to petition the NMED for a variance from the LDR treatment standard to allow on-site stabilization to be utilized to treat this waste. The parallel treatment technology for this treatability group is shipment to an off-site treatment facility. Prior to sending waste to an off-site facility for treatment, the DOE/NNSA shall act in compliance with **Section 2.1.4, Plans for Mixed Waste to be Shipped Off-site for Treatment**. Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

High Mercury Solids and Liquids Schedule

Activity	Compliance Date
A. Provide progress report of current status and availability of treatment and/or disposal options	Completed
B. Complete recycling/treatment of wastes to applicable regulatory standards or,	December 31, 2010
C. Complete shipping of wastes to an off-site treatment/recycling facility	December 31, 2010
D. Provide documentation to NMED that waste was received at off-site treatment/recycling facility	Within 45 working days of receipt of waste at treatment/recycling facility

3.3 Other Types of Mixed Waste Activities

This section describes activities that will be performed to reduce the mixed waste in inventory at SNL/NM.

3.3.1 Sorting of Heterogeneous Debris

TG 10 - Heterogeneous Debris (0.1 m^3)

This treatability group contains a heterogeneous assortment of debris. Therefore, the treatability group requires sorting the waste into, for example, organic and inorganic debris treatability groups (TG8 and TG9), or other treatability groups as appropriate for which preferred treatment options have been selected or will be selected according to the methodology described in the DOE/AL Mixed Waste Treatment Plan. The sorting process began on June 30, 1995.

Shipment off-site for treatment is a preferred option. Should DOE/NNSA decide to send waste to an off-site facility for treatment in lieu of plans to treat such waste on-site, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment**. Sorting activities for mixed waste items added to the STP inventory in accordance with the order (Amendment No. 3 or Revision process) will be completed by December 31, 2010. Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

TG 25 - Classified Items with TCLP Metals (23.0 m^3)

This treatability group contains a heterogeneous assortment of classified items and debris. As such, this treatability group requires sorting the waste into other treatability groups as appropriate for which preferred treatment options have been selected. The sorting process may include, but not be limited to, physical sorting, separation, disassembly, and/or de-classification.

Shipment off-site for treatment and/or disposal is the preferred option, however there is currently no disposal facility that can accept classified mixed waste. The parallel preferred treatment option is on-site treatment by macroencapsulation followed by storage pending the development of further treatment and disposal options. Sorting and/or de-classification activities may be necessary to process the classified mixed waste into items suitable for further treatment on-site or shipment off-site to treatment and/or disposal facilities. Sorting or on-site treatment activities for classified mixed waste items will be completed by December 31, 2010. Should DOE/NNSA send waste to an off-site facility for treatment, the DOE/NNSA shall act in accordance with **Section 2.1.4 Plans for Mixed Waste to be Shipped Off-site for Treatment**. Off-site shipments will be completed by December 31, 2010. Should DOE/NNSA decide to recycle waste, the DOE/NNSA shall act in accordance with **Section 2.1.5 Plans for Recycling.**

3.3.2 Mixed Waste For Which Radionuclide Separation is Planned

Treatability Group 1, Inorganic Debris with Explosive Component neutron generators. These items will be disassembled to yield waste streams that are not mixed. The radioactive portion of the assembled items will be physically separated from the explosive portion.

Radionuclide Separation Schedule (On-Site by SNL)

Activity	Compliance Date
A. Complete an estimate of the volume of waste generated by each case of radionuclide separation.	Completed
B. Complete an estimate of the volume of waste that would exist or be generated without radionuclide separation.	Completed
C. Complete an estimate of the costs of waste treatment and disposal if radionuclide separation is used compared to the estimated costs if it is not used.	Completed
D. Provide the assumptions underlying such waste volume and cost estimates.	Completed
E. Provide characterization methodologies for determining waste	Completed

types	
F. Submit a plan for treatment or management of hazardous waste residues as appropriate.	Completed

4.0 MIXED TRU WASTE (1.33 m^3)

Treatment Group(s):

Assorted Mixed Transuranic Waste

Treatment Technology:

Respondents are required to treat mixed transuranic (MTRU) waste at SNL/NM according to the schedule set forth below:

Activity	Compliance Date
A. Development of treatment technology	Completed
B. Submit permit application amendment, or modification to NMED for treatment of MTRU waste	Completed
C. Complete preparation of existing MTRU wastes for shipment to an off-site certifying facility	Within three (3) years after a) the applicable state's approval of the certifying facility's revised RCRA permit allowing them to receive SNL/NM waste b) the certifying facility is certified by WIPP for heterogeneous and/or homogeneous MTRU waste, as applicable, and c) the certifying facility's waste acceptance criteria are met.
D. Complete shipping of existing MTRU waste to an off-site facility for certification and disposal at the WIPP facility	December 31, 2010
E. Provide documentation to NMED that MTRU waste was received at off-site certifying facility	Within 45 working days of receipt of waste at certifying facility

The above schedule is based on the assumption that WIPP will be a disposal option or that DOE/NNSA will receive a variance from treatment standards for land disposal of MTRU waste to be disposed at WIPP. All revisions to compliance dates shall be in accordance with the procedures set forth in the compliance order.

Proposed Revision 12
Table 4 - Summary of Treatability Groups and Associated Volumes

TG and Description	**Revision No. 11 Volume**	**Proposed Revision No. 12 Volume[a]**
TG 1 Inorganic Debris with Explosive Component	0 m^3	0 m^3
TG 2 Inorganic Debris with a Water Reactive Component	0 m^3	0.01 m^3
TG 3 Reactive Metals	0 m^3	0 m^3
TG 4 Elemental Lead	0 m^3	0 m^3
TG 5 Aqueous Liquids (Corrosive)	0 m^3	0 m^3
TG 6 Elemental Mercury	0 m^3	0 m^3
TG 7 Organic Liquids I	0 m^3	0 m^3
TG 8 Organic Debris with Organic Contaminants	0 m^3	0 m^3
TG 9 Inorganic Debris with TCLP Metals	0.78 m^3	0.25 m^3
TG 10 Heterogeneous Debris	0.2 m^3	0.1 m^3
TG 11 Organic Liquids II	0 m^3	0 m^3
TG 12 Organic Debris with TCLP Metals	2.2 m^3	0.4 m^3
TG 13 Oxidizers	0 m^3	0 m^3
TG 14 Aqueous Liquids with Organic Contaminants	0 m^3	0 m^3

Table 4 - Summary of Treatability Groups and Associated Volumes (Concluded)

TG and Description	**Revision No. 11 Volume**	**Proposed Revision No. 12 Volume[a]**
TG 15 Soils <50% Debris & Particulates with TCLP Metals	0.35 m^3	0.35 m^3
TG 16 Cyanide Waste	0 m^3	0 m^3
TG 17 Liquid/Solid with Organic and/or Metal Contaminants	0 m^3	0 m^3
TG 18 Soils <50% Debris & Particulates with Organic Contaminants	0 m^3	0 m^3
TG 19 Liquids with Metals	0 m^3	0 m^3
TG 20 Propellant with TCLP Metals	0.004 m^3	0 m^3
TG 21 Sealed Sources with TCLP Metals	0.007 m^3	0 m^3
TG 22 Reserved	Not Applicable	Not Applicable
TG 23 Thermal Batteries	0 m^3	0 m^3
TG 24 Spark Gap Tubes with TCLP Metals	0.05 m^3	0.03 m^3
TG 25 Classified Items with TCLP Metals	5.85 m^3	23.0 m^3
TG 26 Debris Items with Reactive Compounds and TCLP Metals	0 m^3	0 m^3
TG 27 High Mercury Solids and Liquids	0 m^3	0 m^3
MTRU Mixed Transuranic Waste	1.05 m^3	1.33 m^3

[a] Volumes indicated are based on volumes reported in the FY07 Annual STP Update. These volumes reflect waste volumes that have been treated or re-characterized but have not yet received NMED approval.