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Title:	Class 2 Permit Modification Request for Technical Area 54, Building 38 (TA-54-38) West Los Alamos National Laboratory Hazardous Waste Facility Permit
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DRAFT FOR PUBLIC REVIEW

Class 2 Permit Modification Request for
Technical Area 54, Building 38 (TA-54-38) West
Los Alamos National Laboratory Hazardous Waste Facility Permit
March 2013

LA-UR-13-20882

Date: _____

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Permit Modification Request Summary

This document is a request for a Class 2 permit modification to the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (Permit). It includes text modifications proposed by the Department of Energy (DOE) and Los Alamos National Security, LLC (LANS), collectively the Permittees. These modifications would not require any changes to the waste management procedures at the permitted units; they do not add Environmental Protection Agency (EPA) waste numbers to those already permitted for storage at each of the units; and they propose no changes to the physical structure. The Permittees are proposing the following modifications to two units at Technical Area 54, Building 38 (TA-54-38) West (also known as the Radioassay and Nondestructive Testing [RANT] facility).

- Increase the storage capacity of the TA-54-38 West Indoor Unit from 3,740 gallons to 4,950 gallons.
- Increase the storage capacity of the TA-54-38 West Outdoor Pad from 7,920 gallons to 42,570 gallons.
- Increase the footprint of the TA-54-38, West Indoor Unit to encompass the entire High Bay and Low Bay within Building 38.
- Rectify an inconsistency in the TA-54-38 West Outdoor Pad and the TA-54-38 West Indoor Unit closure plans to clarify that the loading dock is not part of the indoor unit.
- Address other minor inconsistencies in the language and on the figures within the Permit that are associated with the TA-54-38 West Outdoor Pad and the TA-54-38 West Indoor Unit.

With the exception of the updated Part A form, the proposed modifications to the text of the Permit are shown using red underlined text for additions and red lines through the text for deletions. Only the sections where changes are necessary have been provided within this submittal. New figures are also provided that illustrate the proposed changes to the two units. In addition to the changes to the Permit text, a list of regulatory references and the corresponding location for the information has been included as Table 1. Table 1 includes references to the Permit, previous permit applications, and the location of the information within this permit modification request, where applicable.

This permit modification request is organized as follows:

- This summary and request for a Class 2 permit modification.
- An outline (Table 1) of all the permit application requirements included in Title 40 of the Code of Federal Regulations (40 CFR) Part 270 and references to the location of the information associated with the requirements in past documents or within this permit modification request.
- An expanded description of the operations at the permitted units and an explanation of why the permit modification is needed.
- A description of the permit modification requested and a basis for the level of the modification.
- A discussion of the changes requested to the permit along with a table that outlines references to the TA-54-38 West permitted units within the permit and a brief description of any proposed revisions to the section.
- Proposed revisions to the text and figures of the Permit.
- A certification statement and signatures for the permit modification request as required by 40 CFR §270.11.
- Attachment 1 includes a revised Part A application form that updates general information in the form, adds two permitted units not previously included on the form, and updates the storage

capacity of the permitted units at TA-54-38 West as called for in this permit modification request.

- Attachment 2 includes supplementary information mentioned in Table 1 on the applicability of the seismic location standard in 40 CFR §264.18(a) in accordance with 40 CFR §270.14(b)(11)(ii). This information is not required for this permit modification request, however, it has been included because the New Mexico Environment Department (NMED) has requested this type of information for Permit changes similar to the footprint increase at the TA-54-38 West Indoor Unit.

Table 1. Permit Application Regulatory References and Corresponding Location of Information

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§270.13	Part A permit application	2009 LANL General Part A[1] Updated form included as Attachment 1 of permit modification request Attachment J, Table J-1	Yes
§270.14(b)(1)	General facility description	2003 General Part B[2], Appendix A, Section A.1 2003 TA-54 Part B[3], Section 2.1.3 and Attachment A, Section A.1 Permit[4] Attachment A, Section A.4.3 Additional text description included within unit description of the permit modification request	No
§270.14(b)(2)	Chemical and physical analyses of hazardous waste	Permit[4] Section 2.4 and Permit[4] Attachment C	No
§270.14(b)(3)	Waste analysis plan	Permit[4] Attachment C	No
§264.13(b)	Development and implementation of a written waste analysis plan	Permit[4] Section 2.4 and Permit[4] Attachment C	No
§264.13(c)	Off-site waste analysis requirements	Permit[4] Section 2.2.1	No
§270.14(b)(4)	Security procedures and equipment	Permit[4] Section 2.5 and Permit[4] Attachment A, Section A.4.4	No
§264.14	Security procedures and equipment	Permit[4] Section 2.5 and Permit[4] Attachment A, Section A.4.4	No
§270.14(b)(5)	General inspection schedule	Permit[4] Section 2.6 and Permit[4] Attachment E	No
§264.15(b)	General inspection schedule	Permit[4] Section 2.6 and Permit[4] Attachment E	No
§264.174	Inspections/containers	Permit[4] Section 2.6 and Permit[4] Attachment E	No
§264.193(i)	Tank inspections	NA[5]	NA[5]
§264.195	Overfill control inspections	NA[5]	NA[5]
§264.226	Surface impoundment monitoring and inspection	NA[5]	NA[5]
§264.254	Waste pile monitoring and inspection	NA[5]	NA[5]

Table 1. Permit Application Regulatory References and Corresponding Location of Information (continued)

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§264.273	Land treatment and operating requirements	NA[5]	NA[5]
§264.303	Landfill monitoring and inspection	NA[5]	NA[5]
§264.602	Monitoring, analysis, inspection, response, reporting, and corrective action	NA[5]	NA[5]
§264.1033	Process vent standards	NA[5]	NA[5]
§264.1052	Equipment leak air emission standards	NA[5]	NA[5]
§264.1053	Compressor standards	NA[5]	NA[5]
§264.1058	Standards for pumps, valves, pressure relief devices, flanges, and connections	NA[5]	NA[5]
§264.1084	Air emission standards: tanks	NA[5]	NA[5]
§264.1085	Air emission standards: surface impoundments	NA[5]	NA[5]
§264.1086	Air emission standards: containers	Permit[4] Section 3.9 and Permit[4] Attachment E, Section E.8	No
§264.1088	Inspection and monitoring requirements	Permit[4] Section 3.9 and Permit[4] Attachment E, Section E.8	No
§270.14(b)(6)	Request for waiver from preparedness and prevention requirements of 264 Subpart C	NA[5]	No
§264.30-37	Preparedness and prevention: applicability, design and operation, required equipment, testing and maintenance of equipment, access to communications or alarm systems, required aisle space, and arrangements with local authorities	Permit[4] Section 2.10	No
§264.227	Surface impoundment emergency repairs	NA[5]	NA[5]
§270.14(b)(7)	Contingency Plan	Permit[4] Section 2.11 and Permit[4] Attachment D	No

Table 1. Permit Application Regulatory References and Corresponding Location of Information (continued)

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§264.50-56	Contingency plan and emergency procedures: applicability, purpose/implementation of contingency plan, content of contingency plan, copies of contingency plan, amendment to contingency, emergency coordinator, and emergency procedures	Permit[4] Section 2.11 and Permit[4] Attachment D	No
§270.14(b)(8)	Description of preparedness and prevention	Permit[4] Section 2.10	No
§270.14(b)(8)(i)	Hazard prevention in unloading operations	Permit[4] Attachment A, Section A.4	No
§270.14(b)(8)(ii)	Runoff prevention	Permit[4] Attachment A, Section A.4.6	No
§270.14(b)(8)(iii)	Prevent contamination of water supplies	2003 TA-54 Part B[3], Attachment G, Section G.1.4.3	No
§270.14(b)(8)(iv)	Mitigation of equipment failure and power outages	Permit[4] Section 2.10.1 2003 TA-54 Part B[3], Attachment G, Section G.1.4.4	No
§270.14(b)(8)(v)	Prevention of undue exposure of personnel to hazardous waste	2003 TA-54 Part B[3], Attachment G, Section G.1.4.5	No
§270.14(b)(8)(vi)	Prevention of releases to the atmosphere	2003 TA-54 Part B[3], Attachment G, Section G.1.4.6	No
270.14(b)(9)	Prevention of accidental ignition or reaction of ignitable, reactive, or incompatible wastes	Permit[4] Section 2.8	No
§264.17	Procedures to prevent accidental ignition, reaction of ignitables, reaction of reactives, reaction of incompatibles, and documentation of compliance with 40 CFR §264.17 (general requirements for ignitable, reactive, or incompatible wastes)	Permit[4] Section 2.8	No
§270.14(b)(10)	Traffic pattern: volume, controls, and access	2003 General Part B[2], Appendix A, Section A.2 2003 TA-54 Part B[3], Attachment A, Section A.2 Permit[4] Attachment N, Figure 1 Traffic volume and controls supplement information included within unit description of the permit modification request	Yes

Table 1. Permit Application Regulatory References and Corresponding Location of Information (continued)

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§270.14(b)(11)	Facility/unit identification and location information	2003 General Part B[2], Appendix A, Section A.3 2003 TA-54 Part B[3], Attachment A, Section A.3 Unit is previously permitted, additional information is included within Attachment 2 of permit modification request	Yes
§270.14(b)(11)(i)	Seismic standard applicability [40 CFR §264.18(a)]	2003 General Part B[2], Appendix A, Section A.3.1 2003 TA-54 Part B[3], Attachment A, Section A.3.1 Unit is previously permitted, additional information is included within Attachment 2 of permit modification request	Yes
§270.14(b)(11)(ii)	Seismic standard requirements	2003 General Part B[2], Appendix A, Section A.3.1 2003 TA-54 Part B[3], Attachment A, Section A.3.1 Unit is previously permitted, additional information is included within Attachment 2 of permit modification request	Yes
§270.14(b)(11)(ii)(A)	No fault within 3,000 feet (ft) with displacement in Holocene time	2003 General Part B[2], Appendix A, Section A.3.1 2003 TA-54 Part B[3], Attachment A, Section A.3.1 Unit is previously permitted, additional information is included within Attachment 2 of permit modification request	Yes
§270.14(b)(11)(ii)(B)	If faults which have displacement in Holocene time are present within 3,000 ft, no faults pass within 200 ft of portions of the facility where treatment, storage, or disposal will be conducted	2003 General Part B[2], Appendix A, Section A.3.1 2003 TA-54 Part B[3], Attachment A, Section A.3.1 Unit is previously permitted, additional information is included within Attachment 2 of permit modification request	Yes

Table 1. Permit Application Regulatory References and Corresponding Location of Information (continued)

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§264.18(a)	Seismic considerations	2003 General Part B[2], Appendix A, Section A.3.1 2003 TA-54 Part B[3], Attachment A, Section A.3.1 Unit is previously permitted, additional information is included within Attachment 2 of permit modification request	Yes
§270.14(b)(11)(iii)	100-year floodplain standard	2003 General Part B[2], Appendix A, Section A.3.2 2003 TA-54 Part B[3], Attachment A, Section A.3.2	No
§270.14(b)(11)(iv)(A-C)	Facilities located within the 100-year floodplain	NA[5]	NA[5]
§270.14(b)(11)(v)	Compliance schedule for 40 CFR §264.18(b)	NA[5]	NA[5]
§270.14(b)(12)	Personnel training program (40 CFR §§264.13(a)(3) and 264.16)	Permit[4] Section 2.7 and Permit[4] Attachment F	No
§270.14(b)(13)	Closure and post-closure plans	Permit[4] Attachments G.16 and G.17 Revisions are summarized in Table 2 and illustrated in the revised text portion of this permit modification request	Yes
§264, Subpart G	Closure and post-closure	Permit[4] Attachments G.16 and G.17 Revisions are summarized in Table 2 and illustrated in the revised text portion of this permit modification request	Yes
§264.178	Closure/containers	Permit[4] Attachments G.16 and G.17 Revisions are summarized in Table 2 and illustrated in the revised text portion of this permit modification request	Yes
§264.197	Closure and post-closure care/tanks	NA[5]	NA[5]
§264.228	Surface impoundments	NA[5]	NA[5]
§264.258	Waste piles	NA[5]	NA[5]
§264.280	Land treatment	NA[5]	NA[5]
§264.310	Landfills	NA[5]	NA[5]
§264.351	Incinerators	NA[5]	NA[5]
§264.603	Requirements by the Secretary	NA[5]	NA[5]

Table 1. Permit Application Regulatory References and Corresponding Location of Information (continued)

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§270.14(b)(14)	Deed restrictions/post-closure notices (40 CFR §264.119)	NA[5]	NA[5]
§270.14(b)(15)	Closure cost estimate (40 CFR §264.142)	NA[5]	NA[5]
§270.14(b)(16)	Post-closure cost estimate (40 CFR §264.144)	NA[5]	NA[5]
§270.14(b)(17)	Liability insurance (40 CFR §264.147)	NA[5]	NA[5]
§270.14(b)(18)	Proof of financial coverage (40 CFR §264.149-150)	NA[5]	NA[5]
§270.14(b)(19)	Topographic map requirements	2003 TA-54 Part B[3], Attachment A, Section A.4	No
§270.14(b)(19)(i)	Map scale and date	2003 TA-54 Part B[3], Attachment A, Section A.4	No
§270.14(b)(19)(ii)	100-year floodplain area	2003 TA-54 Part B[3], Attachment A, Section A.4	No
§270.14(b)(19)(iii)	Surface waters	2003 TA-54 Part B[3], Attachment A, Section A.4	No
§270.14(b)(19)(iv)	Surrounding land uses	2003 TA-54 Part B[3], Attachment A, Section A.4 Permit[4] Attachment N, Figures 1, 2, & 3	No
§270.14(b)(19)(v)	Wind rose	2003 TA-54 Part B[3], Attachment A, Section A.4	No
§270.14(b)(19)(vi)	Map orientation	2003 TA-54 Part B[3], Attachment A, Section A.4	No
§270.14(b)(19)(vii)	Legal boundaries	2003 TA-54 Part B[3], Attachment A, Section A.4	No
§270.14(b)(19)(viii)	Access control	2003 TA-54 Part B[3], Attachment A, Section A.4 Permit[4] Attachment N, Figure 9 Revisions are summarized in Table 2 and illustrated in the revised text portion of this permit modification request	Yes
§270.14(b)(19)(ix)	Wells	2003 TA-54 Part B[3], Attachment A, Section A.4	No

Table 1. Permit Application Regulatory References and Corresponding Location of Information (continued)

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§270.14(b)(19)(x)	Buildings	2003 TA-54 Part B[3], Attachment A, Section A.4 Permit[4] Attachment N, Figure 37 Revisions are summarized in Table 2 and illustrated in the revised text portion of this permit modification request	Yes
§270.14(b)(19)(xi)	Drainage barriers or flood control	2003 TA-54 Part B[3], Attachment A, Section A.4	No
§270.14(b)(19)(xii)	Location of operational units	2003 TA-54 Part B[3], Attachment A, Section A.4 Permit[4] Attachment N, Figures 24 & 25	No
§270.14(b)(20)	Considerations Under Federal Law	2003 General Part B[2], Section 3.0	No
§270.3(a)	Wild and Scenic Rivers Act	2003 General Part B[2], Section 3.0	No
§270.3(b)	National Historic Preservation Act	2003 General Part B[2], Section 3.0	No
§270.3(c)	Endangered Species Act	2003 General Part B[2], Section 3.0	No
§270.3(d)	Coastal Zone Management	2003 General Part B[2], Section 3.0	No
§270.3(e)	Fish and Wildlife Coordination Act	2003 General Part B[2], Section 3.0	No
§270.3(f)	Executive Orders	2003 General Part B[2], Section 3.0	No
§270.14(b)(21)	Notice of extension approval for land disposal facilities	NA[5]	NA[5]
§270.14(b)(22)	A summary of the pre-application meeting	NA[5]	NA[5]
§270.14(c)	Groundwater monitoring requirements	NA[5]	NA[5]
§270.14(c)(3)	Topographic map with points of compliance	NA[5]	NA[5]
§270.14(c)(3)	Proposed location of groundwater monitoring wells	NA[5]	NA[5]
§270.14(c)(4)	Description of plume of contamination that has entered the groundwater from a regulated unit at the time the application was submitted	NA[5]	NA[5]

Table 1. Permit Application Regulatory References and Corresponding Location of Information (continued)

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§270.14(c)(4)(i)	Extent of plume indicated on topographic map	NA[5]	NA[5]
§270.14(c)(4)(ii)	Identification of constituents and concentration	NA[5]	NA[5]
§270.14(c)(5)	Detailed plan and engineering report describing proposed groundwater monitoring program	NA[5]	NA[5]
§270.14(c)(6)	If no release detected at date of submitted, then submit following	NA[5]	NA[5]
§270.14(c)(6)(i)	List of proposed indicator parameters, waste constituents, and reaction products	NA[5]	NA[5]
§270.14(c)(6)(ii)	Proposed groundwater monitoring system	NA[5]	NA[5]
§270.14(c)(6)(iii)	Background values for each proposed monitoring parameter	NA[5]	NA[5]
§270.14(c)(6)(iv)	Description of proposed sampling, analysis, and statistic comparisons to be used	NA[5]	NA[5]
§270.14(c)(7)	If a release is detected at the point of compliance, then corrective actions	NA[5]	NA[5]
§270.14(c)(8)	Measured concentration detected exceeds limits	NA[5]	NA[5]
§270.14(d)	Information requirements for SWMUs	2003 TA-54 Part B[3], Section 4.0	No
§270.14(d)(1)(i)	Location of SWMUs on topographic map	2003 TA-54 Part B[3], Section 4.0	No
§270.14(d)(1)(ii)	Types of SWMUs	2003 TA-54 Part B[3], Section 4.0	No
§270.14(d)(1)(iii)	Dimensions and descriptions of SWMUs	2003 TA-54 Part B[3], Section 4.0	No
§270.14(d)(1)(iv)	Dates of SWMU operations	2003 TA-54 Part B[3], Section 4.0	No
§270.14(d)(1)(v)	Waste types managed at SWMUs	2003 TA-54 Part B[3], Section 4.0	No
§270.14(d)(2)	Information on releases from SWMUs	2003 TA-54 Part B[3], Section 4.0	No
§270.14(d)(3)	RCRA Facility Assessment sampling and analysis results	NA[5]	NA[5]
§270.15	Information requirements for containers	Permit[4] Part 3	No

Table 1. Permit Application Regulatory References and Corresponding Location of Information (continued)

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§270.15(a)	Description of containment system	Permit[4] Sections 3.7 & 3.12.1, and Permit[4] Attachment A, Section A.4.3	No
§270.15(b)	Storage areas holding wastes that do not contain free liquids	Permit[4] Sections 3.7 & 3.12.1, and Permit[4] Attachment A, Section A.4.3	No
§264.175(a-c)	Containment	Permit[4] Sections 3.7 & 3.12.1, and Permit[4] Attachment A, Section A.4.3	No
§270.15(c)	Requirements for ignitable, reactive, and incompatible wastes	Permit[4] Section 2.8	No
§270.15(d)	Requirements for incompatible wastes	Permit[4] Section 2.8	No
§264.176	15-meter storage buffer for ignitable or reactive wastes	Permit[4] Section 2.8 2003 TA-54 Part B[3], Figure 2-14	No
§264.177(a)	Incompatible wastes in containers	Permit[4] Section 2.8	No
§264.177(b)	Incompatible wastes in containers	Permit[4] Section 2.8	No
§264.177 (c)	Incompatible wastes separation or segregation	Permit[4] Section 2.8	No
§264.17 (b)	Prevention of reactions	Permit[4] Section 2.8	No
§264.17(c)	Documentation of precautions for ignitable, reactive or incompatible waste	Permit[4] Section 2.8	No
§270.15(e)	Information on air emission control equipment	Permit[4] Section 3.9 and Permit[4] Attachment E, Section E.8	No
§270.27	Air emission controls for containers	Permit[4] Section 3.9 and Permit[4] Attachment E, Section E.8	No
§270.16	Information requirements for tank systems	NA[5]	NA[5]
§270.17	Information requirements for surface impoundments	NA[5]	NA[5]
§270.18	Information requirements for waste piles	NA[5]	NA[5]
§270.19	Information requirements for incinerators	NA[5]	NA[5]
§270.20	Information requirements for land treatment facilities	NA[5]	NA[5]

Table 1. Permit Application Regulatory References and Corresponding Location of Information (continued)

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§270.21	Information requirements for landfills	NA[5]	NA[5]
§270.62	Hazardous waste incinerator permits	NA[5]	NA[5]
§270.63	Permits for land treatment demonstrations using field test or laboratory analysis	NA[5]	NA[5]

1 Los Alamos National Laboratory General Part A Permit Application, Revision 6.0, June 2009 (AR 31720)

2 Los Alamos National Laboratory General Part B Permit Renewal Application, Revision 2.0, August 2003 (AR 16149)

3 Los Alamos National Laboratory Technical Area 54 Part B Permit Renewal Application, Revision 3.0, June 2003 (AR 11809)

4 Hazardous Waste Facility Permit Issued by the New Mexico Environment Department to Los Alamos National Laboratory, EPA No. NM0890010515, November 2010

5 Not applicable

Unit Description and Necessity of Permit Modification

The TA-54-38 West Outdoor Pad and the TA-54-38 West Indoor Unit were originally permitted in 1997 and included in the permit renewal issued by the NMED in November 2010. The permitted units at TA-54-38 West are container storage units that are used to receive, stage, and assemble payload containers of transuranic (TRU) waste for shipment to the Waste Isolation Pilot Plant (WIPP). Brief descriptions of the units located at the RANT facility can be found in Attachment A, *Technical Area (TA) – Unit Descriptions,* Section A.4.3; Attachment G.16, *Technical Area 54, West Building 38 Indoor Container Storage Unit Closure Plan,* Section 2.0; and Attachment G.17, *Technical Area 54, West Outdoor Container Storage Unit Closure Plan,* Section 2.0.

The permitted units at the RANT facility are essential parts of the current LANL process for shipping TRU waste off-site for disposal. In 2012, the *Framework Agreement: Realignment of Environmental Priorities* was established between NMED and DOE. The agreement makes a commitment to safely process, repackage, and remove 3,706 cubic meters of the TRU waste from permitted container storage units at TA-54 Area G by June 30, 2014.

To meet the goals set out within the agreement, increased shipping capability is required from the RANT facility. The Permittees have taken specific measures such as safety basis modifications, procurement of additional equipment, and investment in remediation capability to provide and make more efficient the important capability of waste packing and preparation for transport of waste that is housed at TA-54-38 West. As more waste undergoes WIPP waste characterization procedures, larger containers than originally anticipated are being processed through the two units. Therefore, the overall plan requires the need for an increase in the number and size of containers allowed to be temporarily stored at the RANT facility. The number of shipments of larger containers will increase to meet framework agreement deadlines established between the NMED and the DOE. This permit modification will greatly reduce operational constraints by increasing container storage capacity within both of the units and removing the current space limitations of the unit boundaries within the TA-54-38 West Indoor Unit.

The current total capacity at both the TA-54-West permitted units is 11,660 gallons (or 212 55-gallon drum equivalents [DE]). The maximum number of containers that can be included in a single shipment to WIPP is 42 DEs or 6 standard waste boxes. This means that currently only 3-5 shipments worth of waste containers can stored between both permitted units at any one time and only 2-3 shipments can be pre-loaded and stored within the outdoor unit. Normal operations at the permitted units allow for approximately five shipments of waste to be shipped offsite per week. This already leaves little leeway in the storage capacity to allow for an increase in the number of shipments offsite. The accelerated shipping schedule required by the agreement approximates that 5-10 shipments per week will be necessary to attain offsite shipment goals. The ability to store a volume of waste that is greater than the number of shipments expected within a week is vital to expediting the loading/shipping of waste to WIPP.

The permitted units at TA-54-38 West currently receive drums and standard waste boxes for final preparation and packaging. Fourteen drum configurations (or drum payloads) are stretch wrapped and standard waste boxes are ratchet strapped one on top of the other normally within the Low Bay. Currently, these Type A container configurations are then loaded into TRUPACT II Type B shipping containers within the High Bay. While waste is present at the outdoor unit, traffic is limited to vehicles that are approved and necessary to deliver, manage, or ship waste inventory offsite. Vehicles enter or exit though the TA-54-38 bay doors in the High Bay or through the southwest vehicle gate.

Traffic volumes for the area will not be impacted by increased shipping operations. Mesita del Buey Road, the road that runs most of the length of TA-54, will have more traffic volume locally due to expedited waste shipments. However, the road will continue to have light to moderate traffic volumes overall and flat bed trucks or trailers will transport waste at TA-54. The additional waste shipments per week are not expected to have a measured impact to the average number of vehicles per day at the closest

intersections with publicly accessible roadways (Pajarito and NM 4 as well as Pajarito Road and Diamond Drive).

Modification Description

An increase in the storage capacity of both units at TA-54-38 West will allow for the processing of multiple shipments of standard waste boxes as well as standard drum configurations to WIPP. The current capacity of the TA-54-38 West Indoor Unit is 3,740 gallons (68 DE) and the capacity of the TA-54-38 West Outdoor Pad is 7,920 gallons (144 DE). The requested capacity increases to 4,950 gallons (90 DE) for the TA-54-38 West Indoor Unit and 42,570 gallons (774 DE) for the TA-54-38 West Outdoor Pad will allow for the storage of a sufficient volume of standard waste boxes and standard sized drums to facilitate the greater throughput needed at the units.

Expansion of the footprint for the TA-54-38 West Indoor Unit is necessary to accommodate larger waste containers inside the building. No equipment changes or adjustments to the procedures need to be made for this change. Additionally, waste storage will not occur in entryways, in front of doors, or in any other location that would be considered a high-traffic area. The boundary of the TA-54-38 West Indoor Unit is increased to encompass the entire High Bay and Low Bay areas.

In addition to the class 2 modifications explained above, the Permittees are proposing correction to the closure plans for these units. Permit Attachment J, *Hazardous Waste Management Units*, includes the loading dock at TA-54-38 West as part of the TA-54-38 West Outdoor Pad. However, the closure plan for the TA-54-38 West Indoor Unit erroneously includes descriptions and sample locations for the loading dock that is part of the TA-54-38 West Outdoor Pad. Therefore, Permit Attachment G.16, *Technical Area 54 West, Building 38 Indoor Container Storage Unit Closure Plan* and Permit Attachment G.17, *Technical Area 54 West, Outdoor Container Storage Unit Closure Plan* are being corrected for consistency with Attachment J.

Lastly, other minor inconsistencies within the Permit have been addressed in Attachment A, *Technical Area (TA) – Unit Descriptions;* Attachment B, *Part A Application;* as well as the other attachments previously mentioned. These inconsistencies have been limited in most cases to those associated with the two permitted units at TA-54-38 West. The revisions associated with these inconsistencies are minor in nature and work to correct errors in transcription from application documentation or provide up-to-date information or figures that have not consistently been revised.

Regulatory Basis

The capacity increase for the two permitted units at TA-54-38 West and the expansion of the footprint at the TA-54-38 West Indoor Unit are classified as modifications to a container storage unit "[r]esulting in up to 25% increase in the facility's container storage capacity". The changes are therefore, a Class 2 modification pursuant to 40 CFR § 270.42, Appendix I, Item F.1.b. There is a clear distinction between references to an individual "unit" within a permit and references to "facility" throughout Appendix I of 40 CFR § 270.42. The term "facility" is defined in 40 CFR § 260.10 as:

> *All contiguous land, and structures, other appurtenance, and improvements on the land, used for treating, storing, or disposing of hazardous waste, or for managing hazardous secondary material prior to reclamation. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them).*

It is clear that Appendix I, Item F.1.b refers to the total container storage capacity for all of the container storage units within the LANL Hazardous Waste Facility Permit. The Permittees are requesting an increase in container storage capacity at both of the individual units at TA-54-38 West. The requested new capacity for the two units combined is 47,520 gallons. This is a requested increase in container storage capacity of 35,860 gallons: a 1,120 gallon increase at the indoor unit and 34,650 gallon increase at the outdoor unit. The total facility container storage capacity within the LANL Hazardous Waste Facility Permit is 5,023,730 gallons. Therefore, the resulting increase is less than 1% (0.007%) of the facility's

container storage capacity.

The associated language change for closure of the loading dock at TA-54-38 West as well as other revisions to figures and language discrepancies are classified as administrative changes pursuant to 40 CFR § 270.42, Appendix I, Item A.1, because no changes in requirements are proposed, only rearrangement for clarification purposes and updates to figures and information. Although these changes would be classified as a Class 1 permit modification, they have been included with this Class 2 permit modification request because the revisions are associated with the same units addressed in this permit modification request.

Discussion of Changes

Several changes are being made to Attachment A, *Technical Area (TA) – Unit Descriptions;* Permit Attachment G.16, *Technical Area 54, West, Building 38 Indoor Container Storage Unit Closure Plan*; Permit Attachment G.17 *Technical Area 54 West, Outdoor Container Storage Unit Closure Plan;* Permit Attachment J, *Hazardous Waste Management Units*; and Permit Attachment N, *Figures*. Additionally, the form in Permit Attachment B, *Part A Application* has been updated to include the most current contact information, include units within the permit that were not approved for hazardous waste management at the time of the last form update, and incorporate changes requested in this permit modification. The units added to Attachment B are TA-54 Area G Pad 11 and TA-55-185. Text and figure changes illustrated in the next section are necessary to reflect the changes associated with storage capacity increase of the TA-54-38 West Indoor Unit and TA-54-38 West Outdoor Pad, the increase of the footprint of the TA-54-38 West Indoor Unit, and the correction of information and figure inconsistencies associated with the permitted units. Table 2 summarizes these revisions and also lists the locations where the permitted units are discussed within the Permit but no changes were necessary. Other sections where the permitted units at TA-54-38 West are named but not discussed have not been included in Table 2. These sections are Attachment A, Section A.4.6; Attachment D, Sections D.2.1, D.4.1, and D.6; Attachment D, TA-54 Attachment D Contingency Plan Introduction; and Attachment N, Figure 25. Brief descriptions about the requested revisions associated with the permit modification request are summarized below.

Attachment A Revisions

The minor revisions requested in Attachment A, *Technical Area (TA) – Unit Descriptions*, add a reference to the canopy that is located on the TA-54-38 West Outdoor Pad and removes reference to mobile radioassay trailers that are no longer located at the unit. The canopy is used for the management of hazardous waste and has been located at the unit since prior to the submittal of permit renewal applications. The mobile radioassay trailers that were located at the outdoor unit were removed prior to issuance of the Permit and were removed from the figures of the unit; however, the removal of reference to them in Attachment A was overlooked.

Attachment B and Attachment J Revisions

Changes to Permit Attachment B, *Part A Application* and Permit Attachment J, *Hazardous Waste Management Units*, are necessary to reflect the increase in the operating capacities for both the TA-54-38 West Indoor Unit and the TA-54-38 West Outdoor Pad. Storage of waste at both permitted units will continue in the same manner as required by the Permit. Attachment J has also been updated to correct the square footage of the TA-54-38 West Indoor Unit that was miscalculated. The updated Attachment B has not been shown with editing marks, as the whole form has been given a new revision number and is located as Attachment 1 of this permit modification request.

Attachment G.16 Revisions

Permit Attachments G.16, *Technical Area 54 West, Building 38 Indoor Container Storage Unit Closure Plan* has been revised to incorporate the change to the footprint of the TA-54-38 West Indoor Unit. Additionally, deletions are being made to remove references to the loading dock, correct names of tables, and remove the names of figures that are not included in the closure plan. Currently, the boundaries of the

units allow for storage within a limited number of square footage, and for simplicity of storage operations the Permittees are requesting that the unit boundary encompass the entire High Bay and Low Bay within the building. The closure plan has been revised in the List of Tables, the List of Figures, Sections 2.0 and 6.1, and Figure G.16-1. The List of Tables and the List of Figures have been revised to correct typographical errors. Section 2.0 has been revised to remove the limitations on the footprint within the High Bay and Low Bay and to remove the language associated with the loading dock. Section 6.1 and Figure G.16-1 have been revised to update sample locations that have been added to meet the requirements set out in Permit Section 9.4.7.1.i and to remove the sample locations that were located on the loading dock. The title of Figure G.16-1 has also been revised to reflect that the loading dock is not part of the indoor unit.

Attachment G.17 Revisions

Permit Attachment G.17, *Technical Area 54 West, Outdoor Container Storage Unit Closure Plan*, has been revised in Sections 2.0, 5.3.1, and 6.1; Tables G.17-1 and G.17-2; and on Figure G.17-1 to add references to a structure or correct inaccuracies. Section 2.0 of the closure plan has been revised to replace the "truck ramp" references with reference to the canopy that is located at the TA-54-38 West Outdoor Pad and took the place of the truck ramp prior to 1999. Language associated with the loading dock in the last paragraph of Section 2.0 has been revised to be consistent with the current Permit language rather than the language contained within the revised 1989 LANL Hazardous Waste Facility Permit. Section 5.3.1 has been revised to include mention of the canopy as part of the structures that will be removed at the time of closure. Section 6.1 has been revised to include the sample locations for the loading dock that were previously included in Permit Attachment G.16. The sample areas have also been added to Figure G.17-1. The titles of Table G.17-1 and G.17-2 have been revised to correct typographical errors and an additional typographical error within Table G.17-1 has also been corrected. Additional changes to Figure G.17-1 include the removal of a structure (357) from the unit that has not been located at the unit since prior to Permit issuance and the inclusion of the canopy outside TA-54 West as a structure used for waste management at the outdoor unit. The reference to the structure number of the canopy has also been removed for consistency with other figures. Previously these structures have not been consistently updated on figures.

Attachment N Revisions

Figures 9 and 37 within Permit Attachment N, *Figures* have been updated to include the entire High Bay and Low Bay as part of the TA-54-38 West Indoor Unit and shading on the figure has been changed to clarify the boundaries of indoor and outdoor units.

Table 2. Summary of Changes Requested to the Permit

Permit Section	Revision Description	Justification
Section 3.12.1	No change necessary.	Section 3.12.1 describes the exception to the secondary containment and weather protection requirements, but does not exempt the units from the other requirements of Part 3.
Attachment A, Section A.4	No change necessary.	The description of the location of the units and general transport and container management descriptions are adequate and are included in the 2003 TA-54 Part B Permit Application.
Attachment A, Section A.4.3	No changes necessary.	The description of the permitted units do not limit the footprint of the TA-54-38 West Indoor Unit and correctly include the loading dock as part of the TA-54-38 West Outdoor Pad as included in the 2003 TA-54 Part B Permit Application.
Attachment A, Section A.4.3.1	No changes necessary.	The description of the TA-54-38 West Indoor Unit includes the entire High Bay and Low Bay as included in the 2003 TA-54 Part B Permit Application.
Attachment A, Section A.4.3.2	Description has been updated to include reference to the canopy and remove structures no longer located at the unit.	The description of the TA-54-38 West Outdoor Pad already includes the loading dock from the 2003 TA-54 Part B Permit Application. The section has been revised to include a reference to the canopy that is located at the unit and remove reference to trailers no longer located at the unit.
Attachment A, Section A.4.4	No changes necessary.	The descriptions of access and security controls at TA-54-38 West do not change as part of this permit modification request.
Attachment A, Section A.4.5	No changes necessary.	The emergency equipment at TA-54-38 West described within the section does not change as part of this permit modification request.
Attachment A, Section A.4.6.3	No changes necessary.	Run-on and runoff management methods do not change as part of this permit modification request.
Attachment B, Part A Application	Signatories, revision number, and unit capacities at TA-54, Area G; TA-55; and TA-54-38 West have been updated.	Updates have been incorporated to increase the operating capacity at the TA-54-38 West permitted units and allow the flexibility of managing shipments of larger containers. Outdated contact information and permitted unit capacities have been updated. Red text editing marks are not included within the form, as it has been given a new revision number. Revision 9.0 of the Part A Application is located in Attachment 1 of this permit modification request.

Table 2. Summary of Changes Requested to the Permit (continued)

Permit Section	Revision Description	Justification
Table D-3, TA-54 West	No change necessary.	Emergency equipment at TA-54-38 West listed in this table does not change as part of this permit modification request.
Attachment G.16, Table of Contents	No changes necessary.	Table of contents does not change as part of this permit modification request. However, page numbers may change based on approved changes.
Attachment G.16, List of Tables	Titles of Tables G.16-1 and G.16-2 have been revised.	Title changes were made to be consistent with table titles within the closure plan.
Attachment G.16, List of Figures	Removal of figure names not included within closure plan and renaming of Figure G.16-1.	Corrections were made to erroneously listed figures and Figure G.16-1 was renamed to remove mention of the loading dock.
Attachment G.16, Section 1.0	No change necessary.	Section already describes the indoor unit as the High Bay and Low Bay of TA-54-38 West.
Attachment G.16, Section 2.0	Mention of the loading dock has been removed from the description of the unit and footprint limitations have been removed from the description of the unit.	Revisions have been made to remove the loading dock description from the closure plan and to describe the entire High Bay and Low Bay as the permitted unit boundary.
Attachment G.16, Section 3.0	No changes necessary.	Estimation of maximum waste stored over the life of the facility does not change as part of this permit modification request.
Attachment G.16, Section 4 – All	No changes necessary.	General closure information does not change as part of this permit modification request.
Attachment G.16, Section 5 – All	No changes necessary.	Closure procedures for this unit do not change as part of this permit modification request.
Attachment G.16, Section 6.0	No changes necessary.	The general explanation of the sampling and analysis plan does not change as part of this permit modification request.
Attachment G.16, Section 6.1, Bulleted Items	Sample locations within the building have been increased and loading dock locations have been removed.	Sample locations have been added to account for the larger footprint of the entire High Bay and Low Bay as the permitted unit boundary. The loading dock sample locations were moved to Attachment G.17.
Attachment G.16, Section 6.2 – All	No changes necessary.	Sample collection procedures do not change as part of this permit modification request.
Attachment G.16, Section 6.3 – All	No changes necessary.	Sample management procedures do no change as part of this permit modification request.
Attachment G.16, Section 6.4 – All	No changes necessary.	Sample analysis requirements do not change as part of this permit modification request.
Attachment G.16, Section 7.0	No changes necessary.	Waste management for waste generated during closure activities does not change as part of this permit modification request.
Attachment G.16, Section 8.0	No changes necessary.	The requirement for a closure certification report does not change as part of this permit modification request.

Table 2. Summary of Changes Requested to the Permit (continued)

Permit Section	Revision Description	Justification
Attachment G.16, References	No changes necessary.	No references are changed as part of this permit modification request.
Attachment G.16, Tables – All	No changes necessary.	The information in Tables G.16-1 through 7 has not changed as part of this permit modification request.
Attachment G.16, Figure G.16-1	Figure has been replaced.	Revision illustrates the larger footprint of the entire High Bay and Low Bay as the permitted unit boundary, incorporates sample areas for the larger footprint, and removes the loading dock sample locations. Outdated truck ramp and truck diagram formerly included on the figure and the title of the figure was revised to remove reference to the loading dock.
Attachment G.17, Table of Contents, List of Tables, and List of Figures	No changes necessary.	Table of contents, list of tables, and list of figures do not change as part of this permit modification request. However, page numbers may change based on approved changes.
Attachment G.17, Section 1.0	No change necessary.	Information in the introduction section does not change as part of this permit modification request.
Attachment G.17, Section 2.0	Mention of the truck ramp has been removed from and the canopy has been added to the description of the unit in the final paragraph of the section.	Revisions have been made to remove mention of a truck ramp that was removed prior to renewal of the current Permit and a reference to the canopy that is currently located in its place has been added.
Attachment G.17, Section 3.0	No changes necessary.	Estimation of maximum waste stored over the life of the facility does not change as part of this permit modification request.
Attachment G.17, Section 4 – All	No changes necessary.	General closure information does not change as part of this permit modification request.
Attachment G.17, Section 5.0	No changes necessary.	Closure procedures for this unit do not change as part of this permit modification request.
Attachment G.17, Section 5.1	No changes necessary.	Removal of waste associated with closure activities does not change as part of this permit modification request.
Attachment G.17, Section 5.2 – All	No changes necessary.	Records review and structural assessment do not change as part of this permit modification request.
Attachment G.17, Section 5.3	No changes necessary.	General description of decontamination and removal of structures and equipment does not change as part of this permit modification request.
Attachment G.17, Section 5.3.1	The canopy waste added to the section.	The canopy at the outdoor unit has been added to the list of structures that will be removed as part of closure of the unit.

Table 2. Summary of Changes Requested to the Permit (continued)

Permit Section	Revision Description	Justification
Attachment G.17, Section 5.3.2	No changes necessary.	Decontamination procedures do not changes as part of this permit modification request.
Attachment G.17, Section 5.4	No changes necessary.	Equipment used during decontamination activities does not change as part of this permit modification request.
Attachment G.17, Section 6.0	No changes necessary.	The general explanation of the sampling and analysis plan does not change as part of this permit modification request.
Attachment G.17, Section 6.1	Sample locations for the loading dock have been added to the end of the section.	Revision includes a description of the loading dock sampling locations previously included in Attachment G.16.
Attachment G.17, Section 6.2 – All	No changes necessary.	Sample collection procedures do not change as part of this permit modification request.
Attachment G.17, Section 6.3 – All	No changes necessary.	Sample management procedures do no change as part of this permit modification request.
Attachment G.17, Section 6.4 – All	No changes necessary.	Sample analysis requirements do not change as part of this permit modification request.
Attachment G.17, Section 7.0	No changes necessary.	Waste management for waste generated during closure activities does not change as part of this permit modification request.
Attachment G.16, Section 8.0	No changes necessary.	The requirement for a closure certification report does not change as part of this permit modification request.
Attachment G.17, References	No changes necessary.	No references are changed as part of this permit modification request.
Attachment G.17, Table G.17-1	Title revised and typographical error corrected.	Title corrected to remove reference to “Area G” as the unit is not located at TA-54 Area G. The spelling of “Nitrobenzene” was corrected.
Attachment G.17, Table G.17-2	Title revised.	Title corrected to remove reference to “Area G” as the unit is not located at TA-54 Area G.
Attachment G.17, Table G.17-3 through G.17-6	No changes necessary.	No information in Tables G.16-3 through 6 has been changed as part of this permit modification request.
Attachment G.17, Figure G.17-1	Figure has been replaced.	Revisions include the addition of loading dock sample areas, the removal of a structure (357) that does not exist at the unit. The structure was removed prior to Permit issuance and is not included within either Figures 9 or 37 in Attachment N; however, the figures for the unit were not replaced consistently.
Attachment J, TA-54, West Indoor	Operating capacity has been increased and total square footage of the unit has been corrected.	Capacity of the unit was increased to allow the flexibility of managing shipments of larger containers. The total square footage of the unit was also corrected to reflect the area of the High Bay and the Low Bay.

Table 2. Summary of Changes Requested to the Permit (continued)

Permit Section	Revision Description	Justification
Attachment J, TA-54 West Outdoor Pad	Operating capacity has been increased.	Capacity of the unit was increased to allow the flexibility of managing shipments of larger containers.
Attachment N, Figure 9	Figure has been replaced.	Change has been made to illustrate the larger footprint of the entire High Bay and Low Bay as the permitted unit boundary. The color of the canopy on the figure was also changed to reflect that it is not used for hazardous waste storage to be consistent with the closure plan and an item was added to the legend to reflect these changes.
Attachment N, Figure 37	Figure has been replaced.	Change has been made to illustrate the larger footprint of the entire High Bay and Low Bay as the permitted unit boundary. The color of the canopy on the figure was also changed to reflect that it is not used for hazardous waste storage to be consistent with the closure plan and an item was added to the legend to reflect these changes.

Revised Permit Text and Figures

Changes to Attachment A, Technical Area (TA) – Unit Descriptions

A.4.3.2 TA-54 West Outdoor Pad

The outdoor permitted asphalt pad (which is approximately 4 inches thick and slopes toward the curbed edges to allow for storm water runoff (*see* Figure 37 in Attachment N (*Figures)*) consists of the loading dock at TA-54-38 and the storage pad located on the north, east, and south sides of TA-54-38. The loading dock is 16 ft wide by 38 ft, 10 inches long and is covered by a metal awning. The loading dock is constructed of 6-inch cast-in-place concrete and is located approximately 4 inches above grade. The boundary of the storage pad is delineated by the fence surrounding the pad. ~~ and t~The canopy located on the pad and approximate dimensions of the pad are shown on Figure 37. ~~Mobile radioassay trailers and s~~Storage sheds for supplies and equipment are also ~~stored~~ located on the pad at the outdoor permitted unit (*see* Figure 37 in Attachment N (*Figures)*).

A.4.4 Security and Access Control

The permitted units at TA-54 are provided security by both their locations on top of Mesita del Buey and by 8-foot industrial chain-link fences topped by razor wire or barbed wire. Additional security is provided by a system of facility access controls to ensure that only authorized personnel are granted access. These access controls also ensure that all facility personnel can be identified and located in an emergency. Depending on national security conditions a guard station will be manned west of the TA-54 timed vehicle-access control gate. Guard stations control public access on Pajarito Road east and west of TA-54; only properly identified Facility employees or individuals under their escort will have access to TA-54. During times of low national security, any access to the TA-54 administrative area for Areas L and G is limited by a timed vehicle-access control gate on the entrance road to TA-54. This gate is open during normal working hours from 6:00 a.m. to 6:30 p.m., Monday through Friday (except holidays). Gate hours are subject to change. Access to TA-54 West is by a manually operated gate on the west side of the facility. The gate is also open during normal working hours. Access to any part of TA-54 before or after normal working hours or on weekends requires approval of the appropriate Group Leader or Facility Manager at TA-54. TA-54 is patrolled by security personnel during non-operational hours to ensure that the gates are locked and that unauthorized entry has not occurred. Anyone entering the fenced Area L and Area G waste management areas from the TA-54 administrative area is “badged in” before proceeding. Badging in is the process of identifying the person, assessing his or her security and training status using DOE security badges, and determining the need for an escort. Authorized personnel may enter the fenced portions of Areas L and G only after negotiating additional access controls in the form of walk-through turnstiles and motorized vehicle gates. Each turnstile and vehicle gate is equipped with a badge reader to ensure authorized access only. Resident personnel are required to badge in upon arrival and prior to leaving TA-54. Non-resident personnel and visitors are required to badge or sign in and out at an access control point at the facility operations center. Depending on their level of training, non-resident personnel may be required to be escorted in order to access TA-54 Areas L and G and TA-54 West. Access to the Area L, Area G, and TA-54 West permitted units requires additional controls. Bilingual (*i.e.*, English and Spanish) warning signs are posted on the fence at 50- to 75-ft intervals, are legible from a distance of 25 ft, and can be seen from any approach to this area. The legends on the signs indicate "Danger—Hazardous Waste Storage

Changes to Attachment G.16, Technical Area 54 West, Building 38 Indoor Container Storage Unit Closure Plan

LIST OF TABLES

TABLE NO.	TITLE
G.16-1	Hazardous Waste Constituents of Concern at the Technical Area 54 ~~West~~, Building 38 High Bay
G.16-2	Hazardous Waste Constituents of Concern at the Technical Area 54 ~~West~~, Building 38 Low Bay
G.16-3	Closure Schedule for the Technical Area 54 West, Building 38, Indoor Container Storage Unit
G.16-4	Potential Waste Materials, Waste Types, and Disposal Options
G.16-5	Sample Containers, Preservation Techniques, and Holding Times
G.16-6	Summary of Analytical Methods
G.16-7	Quality Control Sample Types, Applicable Analyses, Frequency, and Acceptance Criteria

LIST OF FIGURES

FIGURE NO.	TITLE
G.16-1	Technical Area 54, Building 38 (High and Low Bay Sampling ~~Grid and Additional Sampling~~ Locations)
~~G.16-2~~	~~Technical Area 54, Building 38 Low Bay Sampling Grid Locations~~
~~G.16-3~~	~~Technical Area 54, Building 38 (High and Low Bay) Loading Zone Sampling Locations~~

1.0 INTRODUCTION

This closure plan describes the activities necessary to close the indoor hazardous waste container storage unit that is comprised of the High Bay and Low Bay rooms located at Technical Area 54 West, Building 38 (TA-54-38) at the Los Alamos National Laboratory (Facility), hereinafter referred to as the permitted unit. The information provided in this closure plan addresses the closure requirements specified in Permit Part 9, the Code of Federal Regulations (CFR), Title 40, Part 264, Subparts G and I for hazardous waste management units operated at the Facility under the Resource Conservation and Recovery Act (RCRA) and the New Mexico Hazardous Waste Act.

Until closure is complete and has been certified in accordance with Permit Section 9.5, a copy of the approved closure plan or the hazardous waste facility permit containing the plan, any approved revisions, and closure activity documentation associated with the closure will be on file with hazardous waste compliance personnel at the Facility and at the U.S. Department of Energy (DOE) Los Alamos Site Office. Prior to closure of the permitted unit, this closure plan may be amended in accordance with Permit Section 9.4.8, as necessary and appropriate, to provide updated sampling and analysis plans and to incorporate updated decontamination technologies. Amended closure plans shall be submitted to the New Mexico Environment Department (Department) for approval prior to implementing closure activities.

2.0 DESCRIPTION OF UNIT TO BE CLOSED

A specific description of the permitted unit can be found in Permit Attachment A (*Technical Area Unit Descriptions*). Additional features and equipment located at the permitted unit and not discussed elsewhere within the Permit are described below.

The permitted unit is comprised of the ~~outdoor loading dock and areas within the~~ entire High Bay (Room 101) and the entire Low Bay (Room 102). Access between the two bays is provided through a 2.4 meter (m) wide by 3.8 m high roll-up door.

The High Bay, which stores fiberglass-reinforced plywood boxes, standard waste boxes (SWB), B25 boxes, and drums of various sizes, is 40 feet (ft) wide and 80 ft long. It is equipped with a 5-ton capacity bridge crane, a truck-axle weighing scale, loading platforms, and TRUPACT–II and HalfPACT lid stands. The floor is a 6-inch, reinforced, epoxy-coated, concrete slab which gently slopes toward a central 50-ft trench and a sump. The sump is locked out and a pipe plug has been installed. The floor has a grated drain (approximately five (5) inches (in.) wide by 57 ft long) that runs down the center of the bay which collects melting snow and water from the trucks that enter the bay. The permitted container storage area within the High Bay~~, which is located along the south side of the room's center wall, is approximately 11 ft wide and 34 ft long~~ and is used as a transuranic (TRU) waste payload-container assembly area and TRUPACT-II/HalfPACT shipper-container loading area. Its primary function is the preparation of waste packages for transport to the Waste Isolation Pilot Plant (WIPP). The TRU waste packaged in the High Bay is predominantly radioactive, but can include mixed waste.

The Low Bay, where waste drums of various sizes are stored, is 40 ft long by 34 ft wide; it was once used for staging hazardous solid and liquid waste while nondestructive radioassay waste characterization activities were performed. The floor is a 6-inch reinforced concrete slab coated with industrial grade enamel paint. ~~The permitted container storage area within the Low Bay is approximately 11 ft^2.~~

The permitted unit's floors and walls (up to 11 ft) will be decontaminated. Decontamination of the permitted unit will be conducted by first removing loose material (*e.g.*, dust, dirt) through sweeping followed by pressure washing or steam cleaning with a solution consisting of a surfactant detergent (*e.g.*, Alconox®) and water mixed in accordance with the manufacturer's recommendations.

Ceilings of the permitted unit, walls above 11 ft, and the areas outside of the permitted unit will be presumed to be free of contamination unless there is some physical indication of contamination (*e.g.*, staining), the records review reveals that large amounts of liquid volatile or semi-volatile organic hazardous waste was stored in the permitted unit, or a spill or release occurred within the permitted unit that could have affected the ceiling or the walls above 11 ft.

Portable berms or other such devices (*e.g.*, absorbent socks, plastic sheeting, wading pools, existing secondary containment) will collect excess wash water and provide containment during the decontamination process.

The floor drain in the High Bay will be plugged before decontamination activities begin to ensure that none of the wash water solution enters the drain located on the floor.

5.4 Equipment Used During Decontamination Activities

Reusable protective clothing, tools, and equipment used during closure decontamination activities will be cleaned with a wash water solution. Residue, disposable equipment, and small reusable equipment that cannot be decontaminated will be containerized and managed as waste as summarized in Table G.16-4 and in accordance with Permit Section 9.4.5 and Section 7.0 of this closure plan.

6.0 SAMPLING AND ANALYSIS PLAN

This SAP addresses the specific requirements in Permit Section 9.4.7 and describes the sampling, analysis, and quality assurance/quality control (QA/QC) methods that will be used to demonstrate that the Permittees have met the closure performance standards outlined in Permit Section 9.2.

6.1 Decontamination Verification Sampling Activities

Decontamination verification sampling activities, and soil sampling if applicable, will be conducted at the permitted unit in order to verify that surfaces and related equipment at the permitted unit meet the closure performance standards in Permit Section 9.2. All samples will be collected and analyzed in accordance with the procedures in Sections 6.2, 6.3, and 6.4 of this closure plan.

One wipe sample will be collected from each piece of decontaminated equipment at the permitted unit. In compliance with Permit Section 9.4.7.1.i, this closure plan will ensure the collection of:

a. ~~four~~nine wipe samples from the High Bay (*see* Figure G.16-1):

   1. ~~two~~four from the floor;

   2. one from ~~the~~each wall; and

   3. one from the sump;

b. ~~one~~six wipe samples from the Low Bay (*see* Figure G.16-1):

1. two from the floor; and

~~b.~~ one from each wall

~~c. one from the floor; and~~

~~d.~~2. ~~two wipe samples from the Loading Dock areas identified as 'sample area 1' and 'sample area 2' (*see* Figure G.16-1).~~

If liquid is found in the sump in the High Bay at the time of the assessment, liquid samples will be collected in accordance with Section 6.2.1 of this closure plan.

Solid chip samples may be collected and analyzed to determine if residual hazardous constituents remain in the concrete floor at the permitted unit.

6.2 Sample Collection Procedures

Samples will be collected in accordance with Permit Section 9.4.7.1 and the procedures identified in this SAP which incorporates guidance from the United States Environmental Protection Agency (USEPA) (EPA, 2002), DOE (DOE, 1995), and other Department-approved procedures.

6.2.1 Liquid Sampling

Liquid samples will be collected and analyzed to determine if residual hazardous constituents remain in the drain at the permitted unit. Liquid samples will be collected using glass or plastic tubes, a composite liquid sampler, a bacon bomb, a bailer, or by pouring liquid in sample containers.

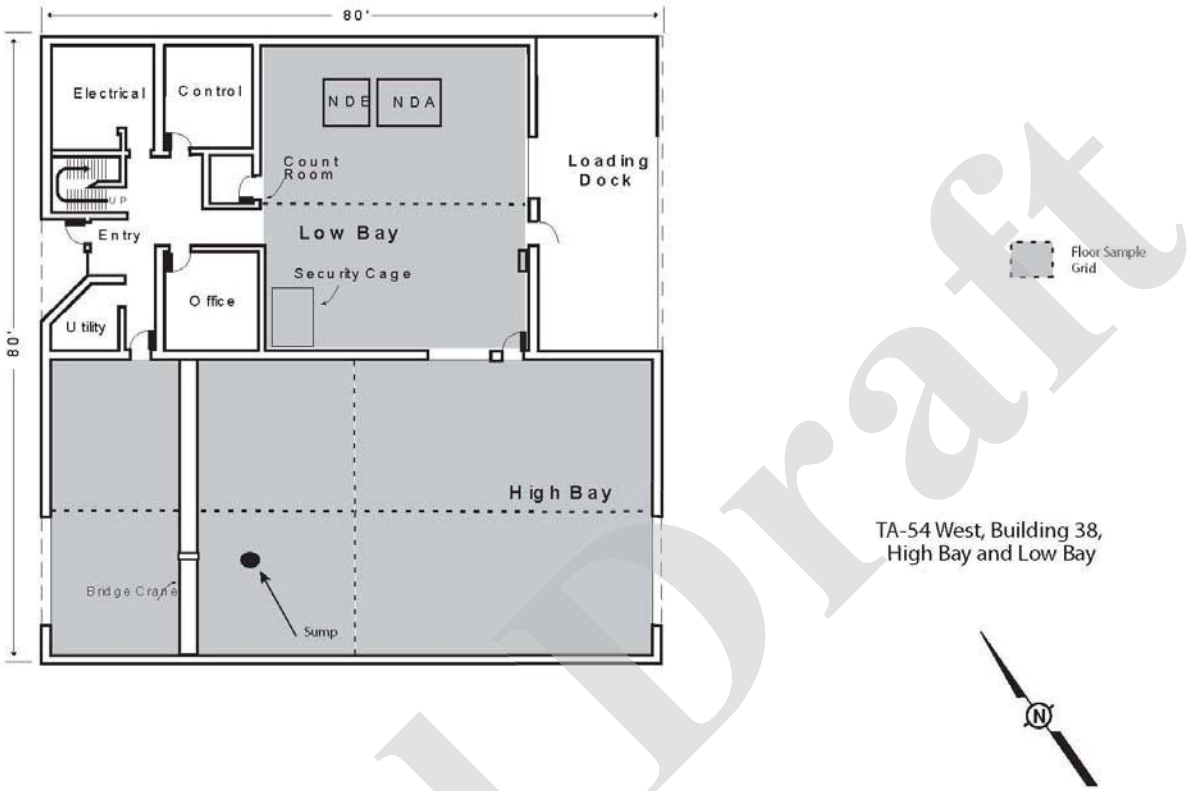
6.2.2 Wipe Sampling

Surface wipe samples will be collected and analyzed to determine if residual hazardous constituents remain on the surfaces and related equipment at the permitted unit. Samples will be collected in accordance with the National Institute of Occupational Safety and Health (NIOSH) *Manual of Analytical Methods* (NIOSH, 1994). The appropriate wipe sample method will consider the type of surface being sampled, the type of constituent being sampled for, the solution used, and the desired constituent concentration detection limit.

The NIOSH method includes wiping a 100-square-centimeter area at each discrete location with a gauze wipe wetted with a liquid solution appropriate for the desired analysis (*e.g.*, deionized water for lead). For wipe sampling, guidance from the analytical laboratory must be obtained prior to wipe verification sampling to confirm that the solution chosen for each analysis is appropriate for the analysis to be conducted and that wipe sampling is a proper technique for the analysis.

6.2.3 Solid Chip Sampling

Solid chip samples may be collected and analyzed to determine if residual hazardous constituents remain in the concrete floor at the permitted unit. Any non-porous inclusions from the sampling location will be removed by brushing or wiping. Using a chisel, drill, hole saw, or similar tool, a minimum 100 grams of the sample will be collected to a depth of 2 cm, or to an alternate depth specified in the assessment and transferred to an appropriate sampling container. The holding time and the preservation techniques to be used for each analysis will be determined from Table G.16-5.


80'
80'
Electrical
Control
NDE
NDA
Count Room
Loading Dock
Entry
Low Bay
Security Cage
Office
Utility
High Bay
Bridge Crane
Sump
Floor Sample Grid
TA-54 West, Building 38, High Bay and Low Bay
N

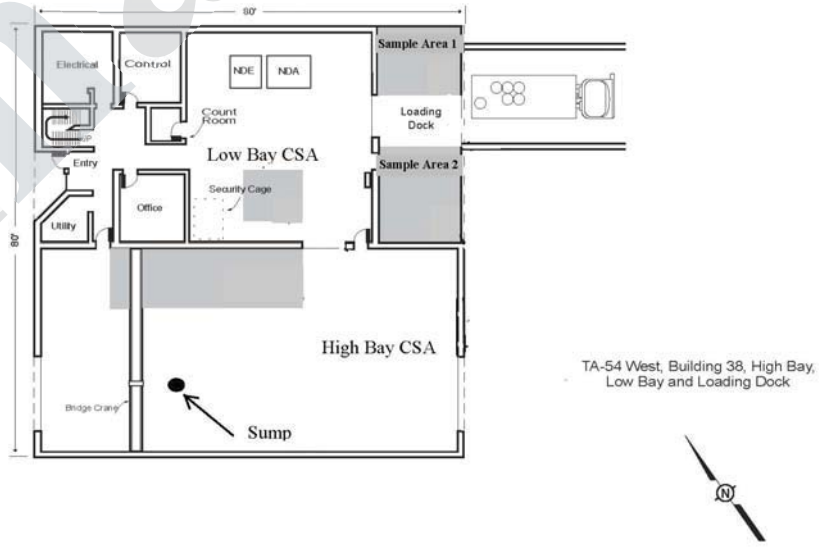

80'
80'
Electrical
Control
NDE
NDA
Count Room
Sample Area 1
Loading Dock
Low Bay CSA
Sample Area 2
Entry
Security Cage
Office
Utility
High Bay CSA
Bridge Crane
Sump
TA-54 West, Building 38, High Bay, Low Bay and Loading Dock
N

Figure G.16-1: Technical Area 54, Building 38 (High~~,~~ and Low Bay~~, and Loading Dock~~ Sampling Locations)

Changes to Attachment G.17, Technical Area 54 West Outdoor Container Storage Unit Closure Plan

1.0 INTRODUCTION

This closure plan describes the activities necessary to close the outdoor hazardous waste container storage unit at Technical Area 54 West, Building 38 (TA-54-38) at the Los Alamos National Laboratory (Facility), hereinafter referred to as the permitted unit. The information provided in this closure plan addresses the closure requirements specified in Permit Part 9 and the Code of Federal Regulations (CFR), Title 40, Part 264, Subparts G and I for hazardous waste management units at the Facility under the Resource Conservation and Recovery Act (RCRA) and the New Mexico Hazardous Waste Act.

Until closure is complete and has been certified in accordance with Permit Section 9.5, a copy of the approved closure plan or the hazardous waste facility permit containing the plan, any approved revisions, and closure activity documentation associated with the closure will be on file with hazardous waste compliance personnel at the Facility and at the U.S. Department of Energy (DOE) Los Alamos Site Office. Prior to closure of the permitted unit, this closure plan may be amended in accordance with Permit Section 9.4.8, as necessary and appropriate, to provide updated sampling and analysis plans and to incorporate updated decontamination technologies. Amended closure plans shall be submitted to the New Mexico Environment Department (Department) for approval prior to implementing closure activities.

2.0 DESCRIPTION OF UNIT TO BE CLOSED

A specific description of the permitted unit can be found in Permit Attachment A (*Technical Area Unit Descriptions*). Additional features and equipment located at the permitted unit and not discussed elsewhere within the Permit are described below.

The permitted unit is located on the north and east sides of TA-54-38 and consists of an asphalt pad (which slopes toward the north and east and has a thickness of approximately four inches) and a loading dock which measures 16 ft wide by 38 ft, 10 inches long. The loading dock is constructed of six inch cast-in-place concrete, is approximately 4 inches above grade, and is covered by a metal roof awning. Small storage sheds (1024 and 1025) for supplies and equipment and not for the storage of hazardous waste, are also located on the permitted unit. The entire permitted unit measures approximately 37,900 square feet.

The slope of the asphalt pad allows for storm water to run off the pad into a one inch wide trench drain that runs along the north edge of the pad. The eastern edge of the pad consists of an asphalt swale that collects storm water and conveys it to a single discharge point at the northeast corner of the site. An asphalt berm running from the extreme northern corner of Building 38 to the drain flanks the northern side of the permitted unit and an asphalt curb flanks the southern side.

The waste typically stored at the permitted unit consists of hazardous and mixed waste in both solid and liquid form. The permitted unit was constructed in 1993, became operational in 1998, and has been subject to waste management regulations under RCRA since its construction. In 2007, the boundaries of the permitted unit were expanded to include the current configuration. The stored wastes include corrosive liquids, sludge, debris, and chemical wastes with metals and volatile and semi-volatile organic constituents.

Permit Part 3 (*Storage in Containers*), Permit Attachment A (*Technical Area Unit Descriptions*), Permit Attachment B (*Part A Application*), and Permit Attachment C (*Waste Analysis Plan)* include information about waste management procedures and hazardous waste constituents stored at the permitted unit.

The lLoading Ddock, located just east of the low bay, is approximately 16 ft wide and 39 ft long and is constructed of cast-in-place concrete. A canopytruck ramp, which is not part of the Loading Dock CSA, runs perpendicular to the loading dock platform. At the bottom of the truck ramp is a 38 inch square grate covering a drainage culvert. The Loading Dock container storage area is divided into two areas on the platform; the first is an area at the north end of the loading dock which measures 16 ft by ten (10) ft. and the second area is at the south end of the loading dock which measures 16 ft by 12 ft. Waste drums of various sizes are stored in the Lloading dDock.

3.0 ESTIMATE OF MAXIMUM WASTE STORED

To date, approximately 612,755 gallons of waste has been stored in the permitted unit. Throughout the life of this Permit it is estimated that an additional 1,870,000 gallons of waste will be stored in the permitted unit.

4.0 GENERAL CLOSURE INFORMATION

4.1 Closure Performance Standard

As required by Permit Section 9.2, the permitted unit will be closed to meet the following performance standards:

a. remove all hazardous waste residues and hazardous constituents; and

b. ensure contaminated media do not contain concentrations of hazardous constituents greater than the clean-up levels established in accordance with Permit Sections 11.4 and 11.5. For soils the cleanup levels shall be established based on residential use. The Permittees must also demonstrate that there is no potential to contaminate groundwater.

If the Permittees are unable to achieve either of the clean closure standards above, they must:

c. control hazardous waste residues, hazardous constituents, and, as applicable, contaminated media such that they do not exceed a total excess cancer risk of 10^{-5} for carcinogenic substances and, for non-carcinogenic substances, a target Hazard Index of 1.0 for human receptors, and meet Ecological Screening Levels established under Permit Section 11.5;

d. minimize the need for further maintenance;

e. control, minimize, or eliminate, to the extent necessary to protect human health and the environment, the post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, groundwater, surface waters, or to the atmosphere; and

f. comply with the closure requirements of Permit Part 9 (*Closure*) and 40 CFR Part 264, Subparts G and I.

Closure of the unit will be deemed complete when: 1) all structures, surfaces, and equipment have been decontaminated, or otherwise properly disposed of; 2) closure has been certified by an independent, professional engineer licensed in the State of New Mexico; and 3) closure certification has been submitted to, and approved by, the Department.

be conducted to determine any previous finding(s) or action(s) that may influence closure activities or potential sampling locations.

5.2.1 Records Review

The Facility Operating and Inspection Records shall be reviewed as outlined in Permit Section 9.4.6.1. The goals of the review will be to:

a. confirm the specific hazardous waste constituents of concern; and

b. confirm additional sampling locations (*e.g.*, locations of spills or chronic conditions identified in the Operating and Inspection Records).

5.2.2 Structural Assessment

An assessment of the permitted unit's physical condition will be conducted in accordance with Permit Section 9.4.6.2. The assessment will include inspecting the asphalt pad and the loading dock for any existing cracks or conditions that indicate a potential for, or an actual, release of constituents. If a crack, gap, or stained area is present, the Permittees will amend this closure plan in order to update the sampling and analysis plan (SAP) (*see* Section 6.0 of this closure plan) to add these sampling locations and the applicable sampling methods and procedures. This inspection will be documented with photographs and drawings, as necessary.

5.3 Decontamination and Removal of Structures and Equipment

In accordance with the procedures in Permit Section 9.4.3, all remaining hazardous waste residues and hazardous constituents will be removed from the permitted unit. The permitted unit's structures and related equipment will be decontaminated, removed, or both and managed appropriately. All waste material will be controlled, handled, characterized, and disposed of in accordance with Permit Attachment C (*Waste Analysis Plan*), Permit Section 9.4.5, and Facility waste management procedures (*see* Table G.17-3). Decontamination activities will ensure the removal of all hazardous waste residues and hazardous waste constituents from the permitted unit to meet the closure performance standards as outlined in Permit Section 9.2.

5.3.1 Removal of Structures and Related Equipment

All surfaces, structures, and related equipment that are removed will not require decontamination, will be considered solid and potentially hazardous waste (as defined by this Permit) when removed, and will be disposed of in accordance with Permit Section 9.4.5 and Section 7.0 of this closure plan.

At this time, there is no equipment identified for removal from the unit; however, if equipment is identified during the assessment, it will be removed and disposed of in accordance with Permit Section 9.4.3.2. The canopy, asphalt pad, the materials associated with the asphalt pad (*e.g.*, the berm around the pad), and a minimum of six inches of the base course and soil underlying the asphalt pad shall be removed after the assessment. If after the removal of the pad (and underlying soil and base course material) the remaining surface shows evidence that the removal to that point has not gathered all appropriate soils and materials associated with the pad, additional soil and materials will be remove. The Permittees shall take precautions to not remove or disturb the soil or tuff that overlies the regulated unit (covered under the March 1, 2005 Compliance Order on Consent (*see* Permit Section 9.3)) beneath the permitted unit. The option of removing small areas of asphalt at sampling locations where contamination

is suspected (*i.e.*, locations of spills or stains) to allow sampling without disturbing the surrounding area prior to the general removal of the pad will be assessed at the time of the assessment.

5.3.2 Decontamination of Structures and Related Equipment

All structures and related equipment that will be reused by the Facility will be decontaminated in accordance with Permit Section 9.4.3.1. The following structures and equipment located at the permitted unit is expected to be left in place and will therefore be decontaminated: the loading dock and the metal awning.

Water-resistant structures and equipment (*i.e.*, the loading dock, the awning) at the permitted unit and not sensitive to water intrusion will be decontaminated by steam cleaning, or pressure washing, with a solution consisting of a surfactant detergent (*e.g.*, Alconox®) and water and mixed in accordance with the manufacturer's recommendation. All other equipment at the permitted unit that is sensitive to water intrusion (*e.g.*, electronic devices or tools) will be decontaminated by washing using a wipe-down method with a solution consisting of a surfactant detergent (*e.g.*, Alconox®) and water and mixed in accordance with the manufacturer's recommendation.

The quantity of the wash solution will be minimized by dispensing from buckets, spray bottles, or other types of containers. Cloths, or other absorbent cleaning devices, will not be reused to wipe down the equipment after being wetted in the wash solution or after spraying solution onto the equipment. Portable berms or other such devices (*e.g.*, absorbent socks, plastic sheeting, wading pools, existing secondary containment) will collect excess water and provide containment during the decontamination process.

5.4 Equipment Used During Decontamination Activities

Reusable protective clothing, tools, and equipment used during decontamination activities will be cleaned with a wash water solution. Residue, disposable equipment, and small reusable equipment that cannot be decontaminated will be containerized and managed as waste as summarized in Table G.17-3 and in accordance with Facility waste management procedures, depending on the regulated constituents present.

6.0 SAMPLING AND ANALYSIS PLAN

This SAP addresses the specific requirements in Permit Section 9.4.7 and describes the sampling, analysis, and quality assurance/quality control (QA/QC) methods that will be used to demonstrate that the Permittees have met the closure performance standards outlined in Permit Section 9.2.

6.1 Soil Sampling and Decontamination Verification Wipe Sampling Activities

Soil sampling and decontamination verification wipe sampling activities will be conducted at the permitted unit in order to verify that the soils beneath the permitted unit as well as the unit's surfaces and related equipment meet the closure performance standards in Permit Section 9.2. All samples will be collected and analyzed in accordance with the procedures in Sections 6.2, 6.3, and 6.4 of this closure plan.

One wipe sample will be collected from each piece of decontaminated equipment related to the permitted unit (*e.g.*, the awning). In compliance with Permit Section 9.4.7.1.i, this closure plan will ensure the collection of wipe samples from the floor and walls of the loading dock for a total of four verification samples.

In compliance with Permit Section 9.4.7.1.ii, this closure plan will ensure the collection of soil samples from the permitted unit at the following locations:

a. one sample from a known past loading zone area ('sample location 1') identified in the permitted unit's records (*see* Permit Section 9.4.7.1.ii(1));

b. one sample every 900 square feet of the permitted unit for a total of 46 samples (*see* Permit Section 9.4.7.1.ii(2));

c. two samples from the swale in the eastern portion of the permitted unit (*see* Permit Section 9.4.7.1.ii(3)); and

d. one sample every 30 feet along the drain line on the northern boundary of the permitted unit for a total of four samples (*see* Permit Section 9.4.7.1.ii(8)).

An additional two wipe samples are required from the Loading Dock areas identified as 'Sample Area 1' and 'Sample Area 2.' Figure G.17-1 illustrates the sampling locations discussed in this section.

6.2 Sample Collection Procedures

Samples will be collected in accordance with the Permit Section 9.4.7.1 and the procedures identified in this SAP which incorporate guidance from the United States Environmental Protection Agency (USEPA) (EPA, 2002), DOE (DOE, 1995), and other Department-approved procedures.

6.2.1 Wipe Sampling

Surface wipe samples will be collected and analyzed to determine if residual to determine if residual hazardous constituents remain on the surfaces and related equipment at the permitted unit. Samples will be collected in accordance with the National Institute of Occupational Safety and Health (NIOSH) *Manual of Analytical Methods* (NIOSH, 1994). The appropriate wipe sample method will consider the type of surface being sampled, the type of constituent being sampled for, the solution used, and the desired constituent concentration detection limit.

The NIOSH method includes wiping a 100 square centimeter area at each discrete location with a gauze wipe wetted with a liquid solution appropriate for the desired analysis (*e.g.*, deionized water for lead). For wipe sampling, guidance from the analytical laboratory must be obtained prior to wipe verification sampling to confirm that the solution chosen for each analysis is appropriate for the analysis to be conducted and that wipe sampling is a proper technique for the analysis.

6.2.2 Soil Sampling

Soil samples will be collected and analyzed to determine if hazardous constituents are present in soils at the permitted unit. Soil samples will be collected using a spade, scoop, auger, trowel, or other equipment as specified in approved methods for the type of analytes (*i.e.*, EPA 1996 or 2002) and from the appropriate depths as directed in Permit Section 9.4.7.1.ii. Samples will be kept at their at-depth temperature or lower, protected from ultraviolet light, sealed tightly in the recommended container, and analyzed within the specific holding times listed in Table G.10-5.

Table G.17-1

Hazardous Waste Constituents of Concern at the Technical Area 54, ~~Area G,~~ West Outdoor Container Storage Unit[a]

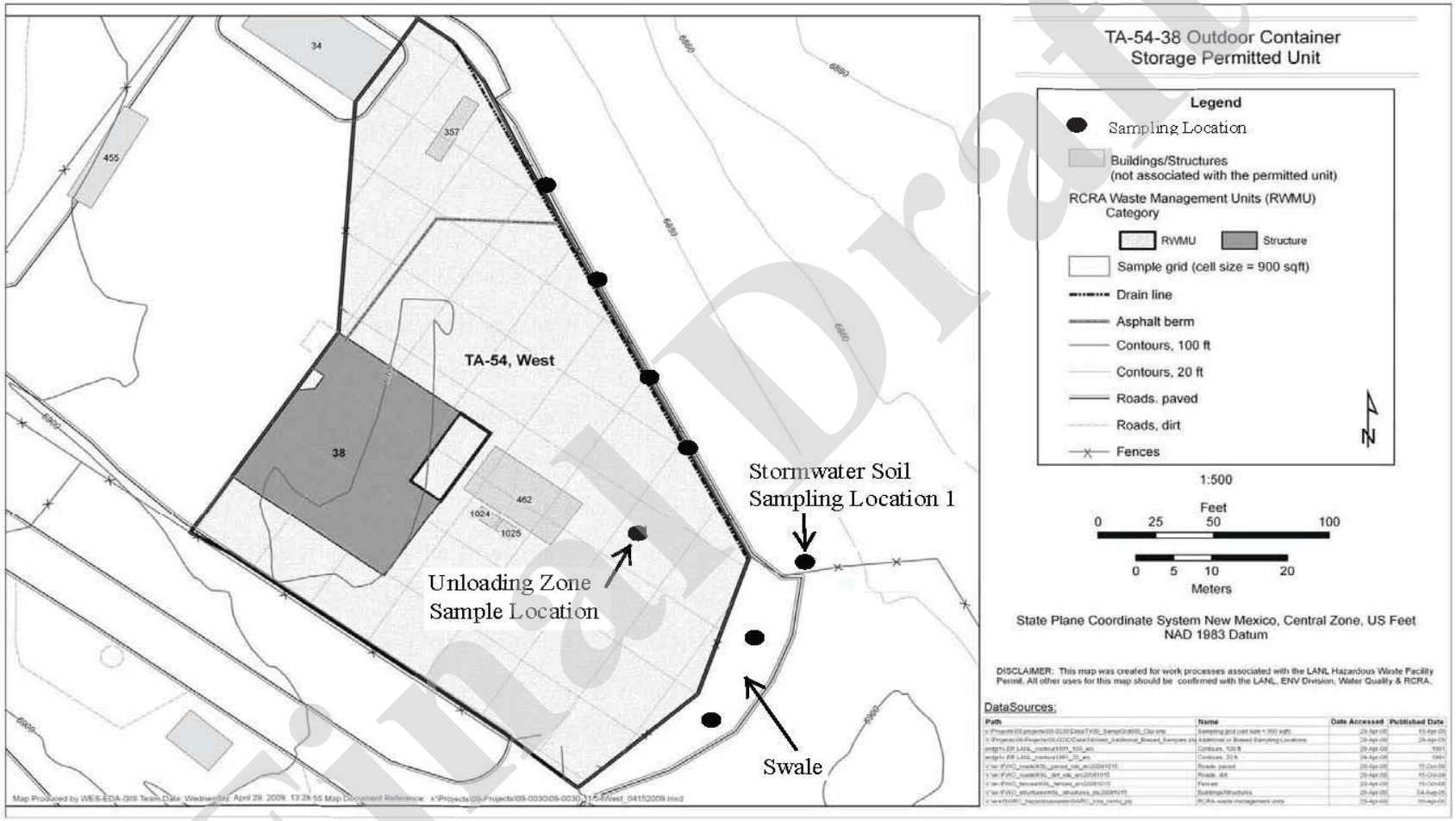
Category	EPA Hazardous Waste Numbers	Specific Constituents
Toxic Metals	D003, D004, D005, D006, D007, D008, D009, D010. D011	Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver
Organic Compounds	D018, D019, D021, D022, D026, D027, D028, D029, D030, D035, D036, D037, D038, D039, D040, D043	Benzene, Carbon tetrachloride, Chlorobenzene, Chloroform, Cresol, 1,4-Dichlorobenzene, 1,2-Dichloroethylene, 2,4-Dinitrotoluene, Methyl ethyl ketone, Nitrobenzene, Pentachlorophenol, Pyridine, Tetrachloroethylene, Trichloroethylene, Vinyl Chloride
	F001, F002, F003, F004, F005	Acetone, Methyl ethyl ketone, , Methylene Chloride, Toluene, MIBK, DBCP, Tetrachlroreth ylene, 1,1,1-trichloroethane, Chlorinated Fluorocarbons, 1,1,2- trichloro-1,1,2-trifluoroethane, ortho-dichlorobenzene, Trichlorofluoromethane, 1,1,2-trichloroethane, Xylene, Ethyl acetate, Ethyl benzene, Ethyl ether, n-butyl alcohol, Cyclohexanone, Methanol, Cresols, Cresylic acid, Nitr~~o~~obenzene, Carbon disulfide, Isobutanol, Pyridine, 2-ethoxyethanol, 2-nitropropane

[a] Based on the unit Operating Record
MIBK = methyl isobutyl ketone or 4-methyl-2-pentanone
DBCP = 1,2-dibromo-3-chloropropane

Table G.17-2

Closure Schedule for Technical Area 54, ~~Area G,~~ West Outdoor Container Storage Unit

Activity	Maximum Time Required
Notify the Department of intent to close and conduct structural assessment.	-45 Days
Final receipt of waste.	Day 0
Complete waste removal.	Day 90
Complete records review and structural assessment.	10 days after completed waste removal or 100 days after final receipt of waste
Complete all closure activities and submit final closure certification report to the Department.	Day 180


TA-54-38 Outdoor Container Storage Permitted Unit
Legend
Sampling Location
Buildings/Structures (not associated with the permitted unit)
RCRA Waste Management Units (RWMU) Category
RWMU
Structure
Sample grid (cell size = 900 sqft)
Drain line
Asphalt berm
Contours, 100 ft
Contours, 20 ft
Roads, paved
Roads, dirt
Fences
N
1:500
Feet
0 25 50 100
0 5 10 20
Meters
State Plane Coordinate System New Mexico, Central Zone, US Feet
NAD 1983 Datum
DISCLAIMER: This map was created for work processes associated with the LANL Hazardous Waste Facility Permit. All other uses for this map should be confirmed with the LANL, ENV Division, Water Quality & RCRA.
DataSources:
Path
Name
Date Accessed
Published Date
TA-54, West
38
34
455
357
462
1024
1025
Stormwater Soil Sampling Location 1
Unloading Zone Sample Location
Swale

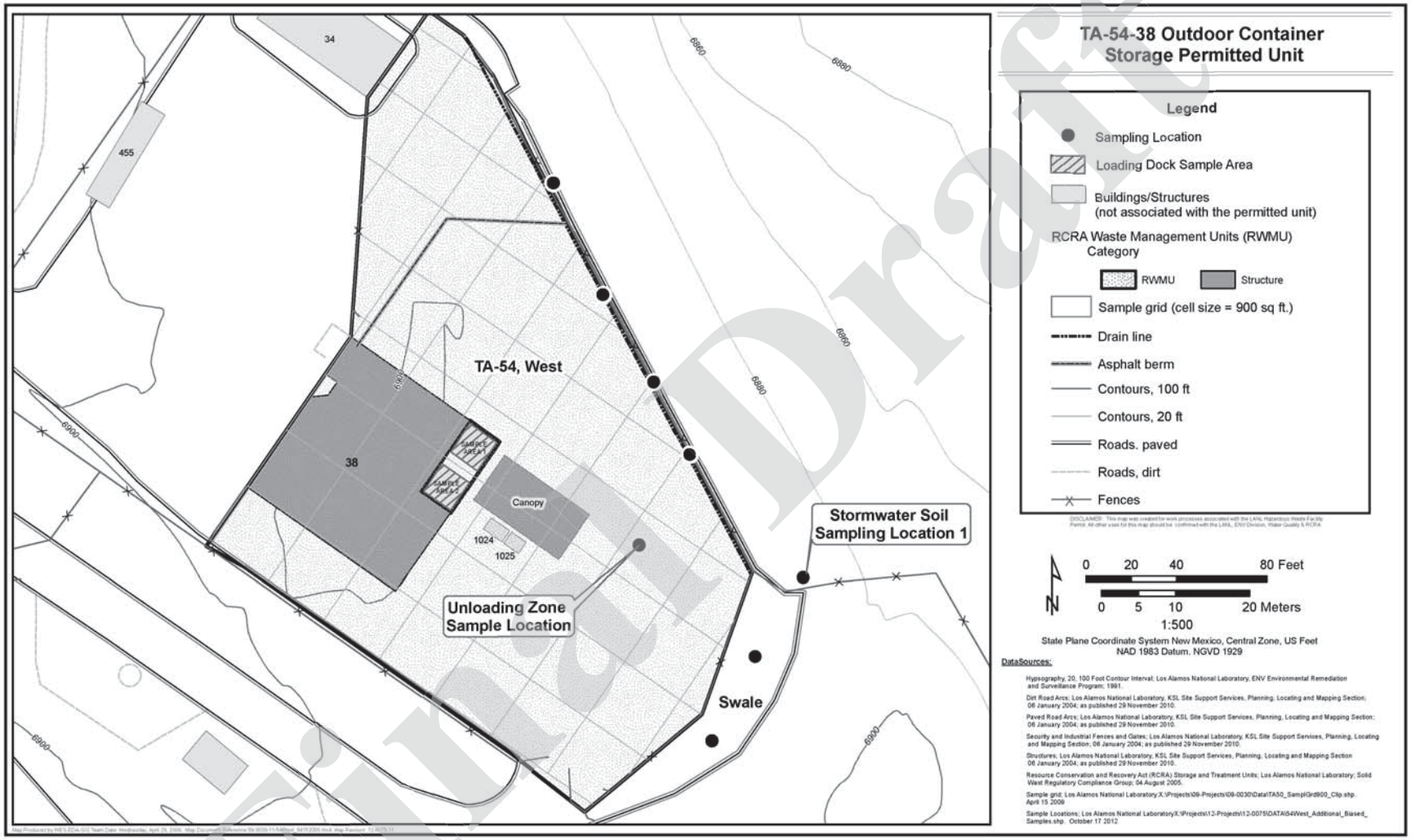


Figure G.17-1: Technical Area 54 West Outdoor Container Storage Unit Grid Sampling and Additional Sampling Locations

Changes to Attachment J: Hazardous Waste Management Units

Unit Identifier	Process Codes	Operating Capacity	General Information	Type of Unit
			feet	
TA-54 Area G Pad 11	S01	682,440 gal	Includes Storage Dome 375 and RTR1 Total square footage – 65,500	Outdoor (associated with a regulated unit)
TA-54 Area G Storage Shed 8	S01	11,880 gal	Also referred to as TA-54-8 Total square footage - 640	Indoor
TA-54 Area G TA-54-33	S01	108,240 gal	Also referred to as Drum Prep Facility Total square footage – 8,570	Indoor
TA-54 "H"	D80	NA	Material Disposal Area H Unit not permitted to receive hazardous waste	Regulated unit
TA-54 "L"	D80	NA	Material Disposal Area L Unit not permitted to receive hazardous waste	Regulated unit
TA-54 Area L Container Storage Unit (below ground)	S99	600 gal	Includes shafts 36 and 37 Wastes removed and unit undergoing closure, closure certification incomplete	NA
TA-54 Area L Outdoor Pad	S01	407,880 gal	Includes all area within fence-line except limited administrative areas. Includes Storage Sheds 31, 68, 69, and 70; Storage Pads 32, 35, 36, and 58; and Building 39; and Storage Dome 215 (former Area 1). Total square footage – 110,500	Outdoor (associated with a regulated unit)
TA-54-38 West Indoor	S01	4,9503,740 gal	Includes High Bay and Low Bay	Indoor

Unit Identifier	Process Codes	Operating Capacity	General Information	Type of Unit
			Total square footage – 4,5060	
TA-54-38 West Outdoor Pad	S01	42,5707,920 gal	Includes loading dock and Pad surrounding Total square footage – 37,900	Outdoor (not associated with a regulated unit)
TA-55-4, B40	S01	21,500 gal	Located in basement Referred to as Area 1 Total square footage – 3,380	Indoor
TA-55-4, K13	S01	2,500 gal	Located in basement Referred to as Area 4 Total square footage - 208	Indoor
TA-55-4, B05	S01	3,600 gal	Located in basement Referred to as Area 5 Non-liquid wastes only Total square footage - 260	Indoor
TA-55-4, B45	S01	11,000 gal	Located in basement Non-liquid wastes only Total square footage - 788	Indoor
TA-55-4, Vault	S01	4,000 gal	Located in basement Referred to as Area 6 Total square footage – 4,020	Indoor
TA-55-4-401 Mixed Waste Storage Tank Unit	S02	Storage - 137 gal	TA-55-4 Room 401 Unit divided into two components (Evaporator Glovebox Storage Tank System and Cementation Storage Tank System) Total square footage – 4,500	Indoor

Revised Figures for Attachment N: Figures

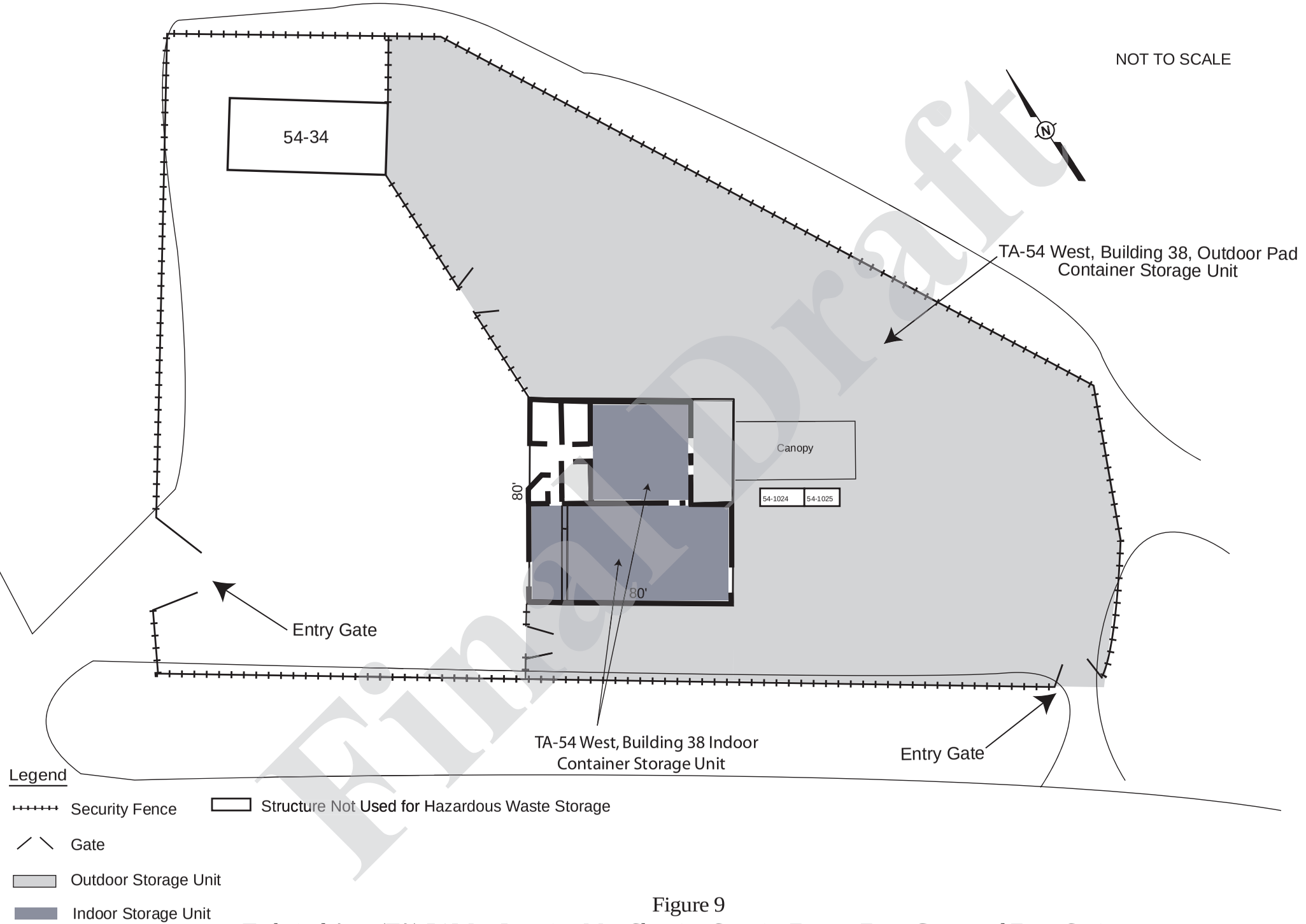


Figure 9
Technical Area (TA) 54 West Location Map Showing Security Fences, Entry Gates, and Entry Stations

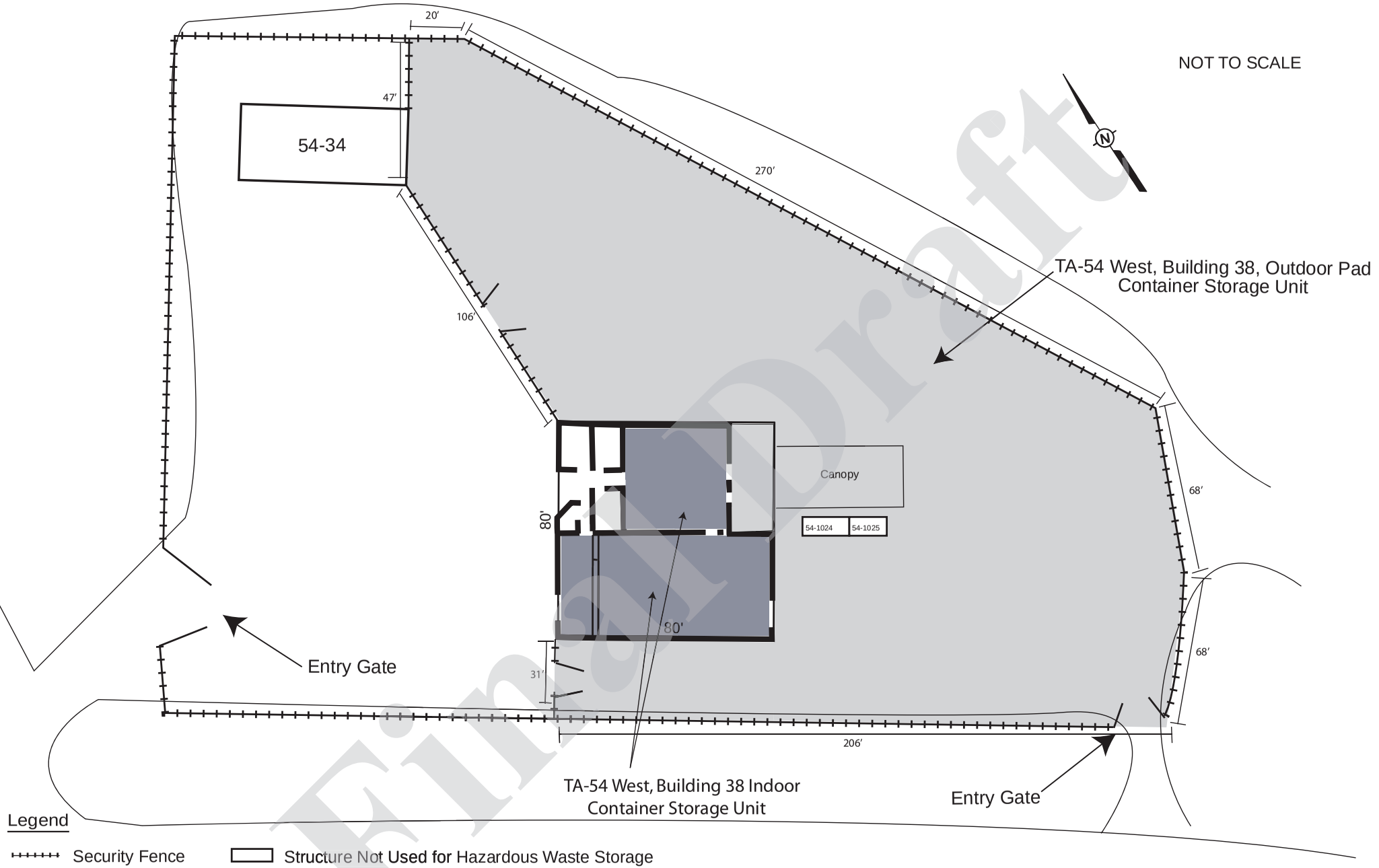


Figure 37
Technical Area (TA) 54 West, Building 38 Indoor (High Bay and Low Bay) and Outdoor Pad

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure 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 and imprisonment for knowing violations.

Alison M. Dorries Date Signed
Division Leader
Environmental Protection Division
Los Alamos National Laboratory
Operator

Juan L. Griego Date Signed
Manager (Acting)
Los Alamos Site Office
National Nuclear Security Administration
U.S. Department of Energy
Owner/Operator

ATTACHMENT 1

Updated Part A Form

LA-UR-13-20882

Date: _____

OMB# 2050-0024; Expires 12/31/2014

SEND COMPLETED FORM TO: The Appropriate State or Regional Office.

United States Environmental Protection Agency
RCRA SUBTITLE C SITE IDENTIFICATION FORM

1. Reason for Submittal

MARK ALL BOX(ES) THAT APPLY

Reason for Submittal:

- ☐ To provide an Initial Notification (first time submitting site identification information / to obtain an EPA ID number for this location)
- ☐ To provide a Subsequent Notification (to update site identification information for this location)
- ☐ As a component of a First RCRA Hazardous Waste Part A Permit Application
- ☑ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment # 9.0)
- ☐ As a component of the Hazardous Waste Report (If marked, see sub-bullet below)
  - ☐ Site was a TSD facility and/or generator of ≥1,000 kg of hazardous waste, >1 kg of acute hazardous waste, or >100 kg of acute hazardous waste spill cleanup in one or more months of the report year (or State equivalent LQG regulations)

2. Site EPA ID Number

EPA ID Number N M 0 8 9 0 0 1 0 5 1 5

3. Site Name

Name: Los Alamos National Laboratory

4. Site Location Information

Street Address: Bikini Atoll Road, SM-30
City, Town, or Village: Los Alamos
County: Los Alamos
State: New Mexico
Country: USA
Zip Code: 87545

5. Site Land Type

☐ Private ☐ County ☐ District ☑ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

6. NAICS Code(s) for the Site (at least 5-digit codes)

A. 9 2 8 1 1
B. 5 4 1 7 1
C. 5 6 2 2 1
D.

7. Site Mailing Address

Street or P.O. Box: PO Box 1663
City, Town, or Village: Los Alamos
State: New Mexico
Country: USA
Zip Code: 87545

8. Site Contact Person

First Name: Juan **MI:** L **Last:** Griego
Title: Acting Manager, Los Alamos Field Office, Department of Energy, National Nuclear Security Administration
Street or P.O. Box: 3747 West Jemez Road
City, Town or Village: Los Alamos
State: New Mexico
Country: USA
Zip Code: 87544
Email: juan.griego@nnsa.doe.gov
Phone: (505) 665-6439 **Ext.:**
Fax: None

9. Legal Owner and Operator of the Site

A. Name of Site's Legal Owner: United States Department of Energy
Date Became Owner: 01/01/1943
Owner Type: ☐ Private ☐ County ☐ District ☑ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other
Street or P.O. Box: 3747 West Jemez Road
City, Town, or Village: Los Alamos
Phone: (505) 667-5105
State: New Mexico
Country: USA
Zip Code: 87544

B. Name of Site's Operator: Los Alamos National Security, LLC
Date Became Operator: 06/01/2006
Operator Type: ☑ Private ☐ County ☐ District ☐ Federal ☐ Tribal ☐ Municipal ☐ State ☐ Other

10. Type of Regulated Waste Activity (at your site)
Mark "Yes" or "No" for all current activities (as of the date submitting the form); complete any additional boxes as instructed.

A. Hazardous Waste Activities; Complete all parts 1-10.

Y ☑ N ☐ **1. Generator of Hazardous Waste**
If "Yes", mark only one of the following – a, b, or c.

- ☑ a. LQG: Generates, in any calendar month, 1,000 kg/mo (2,200 lbs./mo.) or more of hazardous waste; **or** Generates, in any calendar month, or accumulates at any time, more than 1 kg/mo (2.2 lbs./mo) of acute hazardous waste; **or** Generates, in any calendar month, **or** accumulates at any time, more than 100 kg/mo (220 lbs./mo) of acute hazardous spill cleanup material.
- ☐ b. SQG: 100 to 1,000 kg/mo (220 – 2,200 lbs./mo) of non-acute hazardous waste.
- ☐ c. CESQG: Less than 100 kg/mo (220 lbs./mo) of non-acute hazardous waste.

If "Yes" above, indicate other generator activities in 2-4.

Y ☐ N ☑ **2. Short-Term Generator** (generate from a short-term or one-time event and not from on-going processes). If "Yes", provide an explanation in the Comments section.

Y ☐ N ☑ **3. United States Importer of Hazardous Waste**

Y ☑ N ☐ **4. Mixed Waste (hazardous and radioactive) Generator**

Y ☑ N ☐ **5. Transporter of Hazardous Waste**
If "Yes", mark all that apply.

- ☑ a. Transporter
- ☑ b. Transfer Facility (at your site)

Y ☑ N ☐ **6. Treater, Storer, or Disposer of Hazardous Waste** Note: A hazardous waste Part B permit is required for these activities.

Y ☐ N ☑ **7. Recycler of Hazardous Waste**

Y ☐ N ☑ **8. Exempt Boiler and/or Industrial Furnace**
If "Yes", mark all that apply.

- ☐ a. Small Quantity On-site Burner Exemption
- ☐ b. Smelting, Melting, and Refining Furnace Exemption

Y ☐ N ☑ **9. Underground Injection Control**

Y ☑ N ☐ **10. Receives Hazardous Waste from Off-site**

B. Universal Waste Activities; Complete all parts 1-2.

Y ☑ N ☐ **1. Large Quantity Handler of Universal Waste (you accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated]. Indicate types of universal waste managed at your site. If "Yes", mark all that apply.**

a. Batteries	☑
b. Pesticides	☑
c. Mercury containing equipment	☑
d. Lamps	☑
e. Other (specify) _____	☐
f. Other (specify) _____	☐
g. Other (specify) _____	☐

Y ☐ N ☑ **2. Destination Facility for Universal Waste**
Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities; Complete all parts 1-4.

Y ☐ N ☑ **1. Used Oil Transporter**
If "Yes", mark all that apply.

- ☐ a. Transporter
- ☐ b. Transfer Facility (at your site)

Y ☐ N ☑ **2. Used Oil Processor and/or Re-refiner**
If "Yes", mark all that apply.

- ☐ a. Processor
- ☐ b. Re-refiner

Y ☐ N ☑ **3. Off-Specification Used Oil Burner**

Y ☐ N ☑ **4. Used Oil Fuel Marketer**
If "Yes", mark all that apply.

- ☐ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
- ☐ b. Marketer Who First Claims the Used Oil Meets the Specifications

D. Eligible Academic Entities with Laboratories—Notification for opting into or withdrawing from managing laboratory hazardous wastes pursuant to 40 CFR Part 262 Subpart K

❖ You can **ONLY** Opt into Subpart K if:

- you are at least one of the following: a college or university; a teaching hospital that is owned by or has a formal affiliation agreement with a college or university; or a non-profit research institute that is owned by or has a formal affiliation agreement with a college or university; AND
- you have checked with your State to determine if 40 CFR Part 262 Subpart K is effective in your state

Y ☐ N ☑ 1. Opting into or currently operating under 40 CFR Part 262 Subpart K for the management of hazardous wastes in laboratories **See the item-by-item instructions for definitions of types of eligible academic entities. Mark all that apply:**

☐ a. College or University

☐ b. Teaching Hospital that is owned by or has a formal written affiliation agreement with a college or university

☐ c. Non-profit Institute that is owned by or has a formal written affiliation agreement with a college or university

Y ☐ N ☑ 2. Withdrawing from 40 CFR Part 262 Subpart K for the management of hazardous wastes in laboratories

11. Description of Hazardous Waste

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

See Attached						

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-Regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed.

None						

11. Description of Hazardous Wastes

A. Waste Codes for Federally Regulated Hazardous Wastes.

D001	D002	D003	D004	D005	D006	D007
D008	D009	D010	D011	D012	D013	D014
D015	D016	D017	D018	D019	D020	D021
D022	D023	D024	D025	D026	D027	D028
D029	D030	D031	D032	D033	D034	D035
D036	D037	D038	D039	D040	D041	D042
D043	F001	F002	F003	F004	F005	F006
F007	F008	F009	F010	F011	F012	F019
F020	F021	F022	F023	F024	F025	F026
F027	F028	F032	F034	F035	F037	F038
F039	K044	K045	K046	K047	K084	K101
K102	P001	P002	P003	P004	P005	P006
P007	P008	P009	P010	P011	P012	P013
P014	P015	P016	P017	P018	P020	P021
P022	P023	P024	P026	P027	P028	P029
P030	P031	P033	P034	P036	P037	P038
P039	P040	P041	P042	P043	P044	P045
P046	P047	P048	P049	P050	P051	P054
P056	P057	P058	P059	P060	P062	P063
P064	P065	P066	P067	P068	P069	P070
P071	P072	P073	P074	P075	P076	P077
P078	P081	P082	P084	P085	P087	P088
P089	P092	P093	P094	P095	P096	P097
P098	P099	P101	P102	P103	P104	P105
P106	P108	P109	P110	P111	P112	P113
P114	P115	P116	P118	P119	P120	P121
P122	P123	P127	P128	P185	P188	P189
P190	P191	P192	P194	P196	P197	P198
P199	P201	P202	P203	P204	P205	U001
U002	U003	U004	U005	U006	U007	U008
U009	U010	U011	U012	U014	U015	U016
U017	U018	U019	U020	U021	U022	U023
U024	U025	U026	U027	U028	U029	U030
U031	U032	U033	U034	U035	U036	U037
U038	U039	U041	U042	U043	U044	U045
U046	U047	U048	U049	U050	U051	U052
U053	U055	U056	U057	U058	U059	U060
U061	U062	U063	U064	U066	U067	U068
U069	U070	U071	U072	U073	U074	U075

11. Description of Hazardous Wastes
A. Waste Codes for Federally Regulated Hazardous Wastes. (Continued)

U076	U077	U078	U079	U080	U081	U082
U083	U084	U085	U086	U087	U088	U089
U090	U091	U092	U093	U094	U095	U096
U097	U098	U099	U101	U102	U103	U105
U106	U107	U108	U109	U110	U111	U112
U113	U114	U115	U116	U117	U118	U119
U120	U121	U122	U123	U124	U125	U126
U127	U128	U129	U130	U131	U132	U133
U134	U135	U136	U137	U138	U140	U141
U142	U143	U144	U145	U146	U147	U148
U149	U150	U151	U152	U153	U154	U155
U156	U157	U158	U159	U160	U161	U162
U163	U164	U165	U166	U167	U168	U169
U170	U171	U172	U173	U174	U176	U177
U178	U179	U180	U181	U182	U183	U184
U185	U186	U187	U188	U189	U190	U191
U192	U193	U194	U196	U197	U200	U201
U202	U203	U204	U205	U206	U207	U208
U209	U210	U211	U213	U214	U215	U216
U217	U218	U219	U220	U221	U222	U223
U225	U226	U227	U228	U234	U235	U236
U237	U238	U239	U240	U243	U244	U246
U247	U248	U249	U271	U278	U279	U280
U328	U353	U359	U364	U367	U372	U373
U387	U389	U394	U395	U404	U409	U410
U411						

12. Notification of Hazardous Secondary Material (HSM) Activity

Y ☐ N ☑ Are you notifying under 40 CFR 260.42 that you will begin managing, are managing, or will stop managing hazardous secondary material under 40 CFR 261.2(a)(2)(ii), 40 CFR 261.4(a)(23), (24), or (25)?

If "Yes", you must fill out the Addendum to the Site Identification Form: Notification for Managing Hazardous Secondary Material.

13. Comments

14. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure 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 fines and imprisonment for knowing violations. For the RCRA Hazardous Waste Part A Permit Application, all owner(s) and operator(s) must sign (see 40 CFR 270.10(b) and 270.11).

Signature of legal owner, operator, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
	Alison M. Dorries, ENV, LANS	
	Juan L. Griego, Acting Field Office Mang	

EPA ID Number | N | M | 0 | 8 | 9 | 0 | 0 | 1 | 0 | 5 | 1 | 5 | OMB#: 2050-0024; Expires 12/31/2014

ADDENDUM TO THE SITE IDENTIFICATION FORM:

NOTIFICATION OF HAZARDOUS SECONDARY MATERIAL ACTIVITY

ONLY fill out this form if:

- ❖ You are located in a State that allows you to manage excluded hazardous secondary material (HSM) under 40 CFR 261.2(a)(2)(ii), 261.4(a)(23), (24), or (25) (or state equivalent). See http://www.epa.gov/epawaste/hazard/dsw/statespf.htm for a list of eligible states; **AND**
- ❖ You are or will be managing excluded HSM in compliance with 40 CFR 261.2(a)(2)(ii), 261.4(a)(23), (24), or (25) (or state equivalent) **or** you have stopped managing excluded HSM in compliance with the exclusion(s) and do not expect to manage any amount of excluded HSM under the exclusion(s) for at least one year. Do not include any information regarding your hazardous waste activities in this section.

1. Indicate reason for notification. Include dates where requested.

☐ Facility will begin managing excluded HSM as of _____ (mm/dd/yyyy).

☐ Facility is still managing excluded HSM/re-notifying as required by March 1 of each even-numbered year.

☐ Facility has stopped managing excluded HSM as of _____ (mm/dd/yyyy) and is notifying as required.

2. Description of excluded HSM activity. Please list the appropriate codes and quantities in **short tons** to describe your excluded HSM activity ONLY (do not include any information regarding your hazardous wastes). Use additional pages if more space is needed.

a. Facility code (answer using codes listed in the Code List section of the instructions)	**b. Waste code(s) for HSM**	**c. Estimated short tons of excluded HSM to be managed annually**	**d. Actual short tons of excluded HSM that was managed during the most recent odd-numbered year**	**e. Land-based unit code** (answer using codes listed in the Code List section of the instructions)

3. Facility has financial assurance pursuant to 40 CFR 261.4(a)(24)(vi). (Financial assurance is required for reclaimers and intermediate facilities managing excluded HSM under 40 CFR 261.4(a)(24) and (25))

Y ☐ N ☐ Does this facility have financial assurance pursuant to 40 CFR 261.4(a)(24)(vi)?

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United States Environmental Protection Agency

HARDOUS WASTE PERMIT INFORMATION FORM

1. Facility Permit Contact	**First Name:** Juan	**MI:** L	**Last Name:** Griego
	Contact Title: Los Alamos Field Office Manager (Acting)		
	Phone Number: 505-665-6439	**Ext.:**	**Email:** juan.griego@nnsa.doe.gov
2. Facility Permit Contact Mailing Address	**Street or P. O. Box:** 3747 West Jemez Road		
	City, Town, or Village: Los Alamos		
	State: New Mexico		
	Country: USA	**Zip Code:** 87544	
3. Operator Mailing Address and Telephone Number	**Street or P. O. Box:** P.O. Box 1663		
	City, Town, or Village: Los Alamos		
	State: New Mexico	**Phone Number:** 505-665-6952	
	Country: USA	**Zip Code:** 87545	
4. Facility Existence Date	**Facility Existence Date (mm/dd/yyyy):** 01/01/1943		

5. Other Environmental Permits

A. Facility Type *(Enter code)*	B. Permit Number	C. Description
See Attached		

6. Nature of Business: The central mission of Los Alamos National Laboratory is the reduction of global nuclear danger supported by research that also contributes to conventional defense, civilian, and industrial needs. This includes programs in nuclear, medium energy, and space physics; hydrodynamics; conventional explosives; chemistry; metallurgy; radiochemistry; space nuclear systems; controlled thermonuclear fusion; laser research; environmental technology; geothermal, solar, and fossil energy research; nuclear safeguards; biomedicine; health and biotechnology; and industrial partnerships.

5. Other Environmental Permits

A. Facility Type (Enter code)	B. Permit Number	C. Description
National Pollutant Discharge Elimination System (NPDES):		
NPDES Construction General Permit:		Construction Project Title
N	NMR15FGG67	Regional Wells Project
N	NMR15EZ89	TA-55 Construction
N	NMR15EZ83	TA-3 Construction
N	NMR15FB34	TA-21 Closure Project
N	NMR10H2255	Tactical Training Facility
N	NMR10H9624	Diamond/Eniwetok Intersection
N	NMR10HF45	TA-16 Indoor Firing Range
N	NMR10HG73	TA-18 D&D Project
N	NMR10HG93	TA-35 Parking Lot
N	NMR10HH13	SERF Expansion Project
N	NMR10HH52	Zero Liquid Discharge
N	NMR10HI23	TA-40 Lift Station Project
N	NMR10HI56	SM-43 Parking Lot
N	NMR10HI66	Water Canyon SD Replacement
N	NMR10HM30	Sigma Mesa Fill Yard
N	NMR10HM39	PV Ductbank
Industrial Point Source Permit:		
N	NM0028355	NPDES Industrial Point Source Discharge
NPDES Storm Water Multi-Sector General Permit (MSGP) for Industrial Activities		
N	MSGP-2008	NPDES MSGP, September 29, 2008
Resource Conservation and Recovery Act (RCRA):		
R	NM0890090105151	RCRA Hazardous Waste Facility Permit
Groundwater Discharge Plans (GDP):		
E	DP-857	TA-46 SWWS Plant and TA-3 Sanitary Effluent Reclamation Facility (SERF), Approved July 1992, Discharge Permit Renewal Application, July 2010 (NMED Renewal Pending)
E	DP-1132	TA-50 Radioactive Liquid Waste Treatment Facility, Discharge Permit Application, February 2012 (NMED approval pending)
E	DP-1589	Twelve (12) Domestic Septic Tank/Leachfield Systems, Discharge Permit Application, June 2010 (NMED approval pending)
E	DP-1793	On-Site Treatment and Land Application of Groundwater, Discharge Permit Application, December 2011 (NMED approval pending)
Section 404 Dredge and Fill Permits with U.S. Army Corps of Engineers		
E	SPA201-1-0044	Canon de Valle, Emergency Culvert Replacement Project
E	SPA201-1-0477	Los Alamos Canyon, Emergency Bank Stabilization Project
E	SPA201-1-0512	Water Canyon, Culvert Replacement Project
Air Quality Permits:		
Air Quality Operating Permit (20.2.70 NMAC)		

5. Other Environmental Permits

A. Facility Type *(Enter code)*	B. Permit Number													C. Description
E	P	1	0	0	-	R	1	-	M	1				LANL Air Emissions
Air Quality (20.2.72 NMAC)														
E	2	1	9	5										Portable Rock Crusher
E	2	1	9	5	B	-	M	2						TA-3 Steam Plant – Flue Gas Recirculation
E	2	1	9	5	F	-	R	3						TA-33 1600kW Generator
E	G	C	P	3	-	2	1	9	5	G	-	R	1	TA-60 Asphalt Plant
E	2	1	9	5	H									Data disintegrator
E	2	1	9	5	N	-	R	2						Chemistry and Metallurgy Research Replacement Facility
E	2	1	9	5	P									TA-33 1-225 kW/2-20 kW Diesel Generators
Air Quality (National Emission Standards for Hazardous Air Pollutants) Beryllium Machining:														
E	6	3	4	-	M	2								TA-3-141
E	6	3	2											TA-35-213
E	1	0	8	-	M	1	-	R	7					TA-55-4

7. Process Codes and Design Capacities – Enter information in the Section on Form Page 3

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04, and X99), describe the process (including its design capacity) in the space provided in Item 8.

B. PROCESS DESIGN CAPACITY- For each code entered in Item 7.A; enter the capacity of the process.

1. **AMOUNT - Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.**
2. **UNIT OF MEASURE - For each amount entered in Item 7.B(1), enter the code in Item 7.B(2) from the list of unit of measure codes below that describes the unit of measure used. Select only from the units of measure in this list.**

C. PROCESS TOTAL NUMBER OF UNITS - Enter the total number of units for each corresponding process code.

Process Code	Process	Appropriate Unit of Measure for Process Design Capacity
Disposal		
D79	Underground Injection Well Disposal	Gallons; Liters; Gallons Per Day; or Liters Per Day
D80	Landfill	Acre-feet; Hectares-meter; Acres; Cubic Meters; Hectares; Cubic Yards
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day or Liters Per Day
D83	Surface Impoundment Disposal	Gallons; Liters; Cubic Meters; or Cubic Yards
D99	Other Disposal	Any Unit of Measure Listed Below
Storage		
S01	Container	Gallons; Liters; Cubic Meters; or Cubic Yards
S02	Tank Storage	Gallons; Liters; Cubic Meters; or Cubic Yards
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment	Gallons; Liters; Cubic Meters; or Cubic Yards
S05	Drip Pad	Gallons; Liters; Cubic Meters; Hectares; or Cubic Yards
S06	Containment Building Storage	Cubic Yards or Cubic Meters
S99	Other Storage	Any Unit of Measure Listed Below
Treatment		
T01	Tank Treatment	Gallons Per Day; Liters Per Day
T02	Surface Impoundment	Gallons Per Day; Liters Per Day
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; BTUs Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons Per Day; Metric Tons Per Hour; or Million BTU Per Hour
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Short Tons Per Day; BTUs Per Hour; Gallons Per Day; Liters Per Hour; or Million BTU Per Hour
T80	Boiler	Gallons; Liters; Gallons Per Hour; Liters Per Hour; BTUs Per Hour; or Million BTU Per Hour

Process Code	Process	Appropriate Unit of Measure for Process Design Capacity (for T81 –T94)
Treatment (Continued)		
T81	Cement Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; BTU Per Hour; Liters Per Hour; Kilograms Per Hour; or Million BTU Per Hour
T82	Lime Kiln	
T83	Aggregate Kiln	
T84	Phosphate Kiln	
T85	Coke Oven	
T86	Blast Furnace	
T87	Smelting, Melting, or Refining Furnace	
T88	Titanium Dioxide Chloride Oxidation Reactor	
T89	Methane Reforming Furnace	
T90	Pulping Liquor Recovery Furnace	
T91	Combustion Device Used in the Recovery of Sulfur Values from Spent Sulfuric Acid	
T92	Halogen Acid Furnaces	
T93	Other Industrial Furnaces Listed in 40 CFR 260.10	
T94	Containment Building Treatment	Cubic Yards; Cubic Meters; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; Gallons Per Day; Liters Per Day, Metric Tons Per Hour, or Million Btu Per Hour
Miscellaneous (Subpart X)		
X01	Open Burning/Open Detonation	Any Unit of Measure Listed Below
X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; Kilograms Per Hour; Gallons Per Hour; Liters Per Hour; or Gallons Per Day
X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; BTU Per Hour; or Million BTU Per Hour
X04	Geologic Repository	Cubic Yards; Cubic Meters; Acre-feet; Hectare-meter; Gallons; or Liters
X99	Other Subpart X	Any Unit Measure Listed Below

Unit of Measure	Unit of Measure Code
Gallons	G
Gallons Per Hour	E
Gallons Per Day	U
Liters	L
Liters Per Hour	H
Liters Per Day	V
Short Tons Per Hour	D
Short Tons Per Day	N
Metric Tons Per Hour	W
Metric Tons Per Day	S
Pounds Per Hour	J
Kilograms Per Hour	R
Million Btu Per Hour	X
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
Btu Per Hour	I

7. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 7 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. PROCESS DESIGN CAPACITY (2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	1	S	0	2	533.788	G	001	
					Technical Area 3			
	1	S	0	1	18,500	G	001	
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
1	0							
1	1							
1	2							
1	3							

Note: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" process (i.e., D99, S99, T04 and X99) in Item 8.

8. Other Processes (Follow instructions from Item 7 for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in sequence with Item 7)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	(2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	2	T	0	4	100.00	U	001	

7. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 7 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. PROCESS DESIGN CAPACITY (2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	1	S	0	2	533.788	G	001	
					Technical Area 14			
	1	X	0	1	1,000 50/20	See Lines 2 & 3	002	
	2				Pounds per detonation Gallons per burn/pounds per burn			
	3				Units identified as TA-14-23 is to be closed in accordance with the Code of Federal Regulations (CFR), Title 40, Part 265, Subpart G. Permitted status is not requested.			
	4							
	5							
	6							
	7							
	8							
	9							
1	0							
1	1							
1	2							
1	3							

Note: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" process (i.e., D99, S99, T04 and X99) in Item 8.

8. Other Processes (Follow instructions from Item 7 for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in sequence with Item 7)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	(2) Unit of Measure		For Official Use Only
X	2	T	0	4	100.00	U	001	

7. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 7 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. PROCESS DESIGN CAPACITY (2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	1	S	0	2	533.788	G	001	
					Technical Area 16			
	1	X	0	1	1,000 50/1,000	See Line 2	002	
	2				Pounds per burn Gallons per burn/pounds per burn			
	3							
	4							
	5							
	6							
	7							
	8							
	9							
1	0							
1	1							
1	2							
1	3							

Note: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" process (i.e., D99, S99, T04 and X99) in Item 8.

8. Other Processes (Follow instructions from Item 7 for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in sequence with Item 7)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	(2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	2	T	0	4	100.00	U	001	

7. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 7 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. PROCESS DESIGN CAPACITY (2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	1	S	0	2	533.788	G	001	
					Technical Area 36			
	1	X	0	1	2,000	See line 2	001	
	2				Pounds per detonation			
	3							
	4							
	5							
	6							
	7							
	8							
	9							
1	0							
1	1							
1	2							
1	3							

Note: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" process (i.e., D99, S99, T04 and X99) in Item 8.

8. Other Processes (Follow instructions from Item 7 for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in sequence with Item 7)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	(2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	2	T	0	4	100.00	U	001	

7. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 7 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. PROCESS DESIGN CAPACITY (2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	1	S	0	2	533.788	G	001	
					Technical Area 39			
	1	X	0	1	1,000	See Lines 2 and 3	002	
	2				1,000 pounds per detonation			
	3				One unit identified as TA-39-57 is to be closed in accordance with Code of Federal Regulations (CFR), Title 40, Part 265, Subpart G. Permitted status is not requested.			
	4							
	5							
	6							
	7							
	8							
	9							
1	0							
1	1							
1	2							
1	3							

Note: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" process (i.e., D99, S99, T04 and X99) in Item 8.

8. Other Processes (Follow instructions from Item 7 for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in sequence with Item 7)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	(2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	2	T	0	4	100.00	U	001	

7. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 7 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. PROCESS DESIGN CAPACITY (2) Unit of Measure	C. Process Total Number of Units	For Official Use Only					
X	1	S	0	2	533.788	G	001						
					Technical Area 50								
	1	S	0	1	31,500	G	002						
	2												
	3												
	4												
	5												
	6												
	7												
	8												
	9												
1	0												
1	1												
1	2												
1	3												

Note: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" process (i.e., D99, S99, T04 and X99) in Item 8.

8. Other Processes (Follow instructions from Item 7 for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in sequence with Item 7)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	(2) Unit of Measure	C. Process Total Number of Units	For Official Use Only					
X	2	T	0	4	100.00	U	001						

7. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 7 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. PROCESS DESIGN CAPACITY (2) Unit of Measure	C. Process Total Number of Units	For Official Use Only					
X	1	S	0	2	533.788	G	001						
					Technical Area 54, Area L								
	1	S	0	1	407,880	G	001						
	2	D	8	0	1,200	See Line 3	001						
	3				To be closed in accordance with Code of Federal Regulations (CFR), Title 40, Part 265, Subpart G. Permitted status is not requested. The unit of measure for capacity is cubic yards.								
	4												
	5												
	6												
	7												
	8												
	9												
1	0												
1	1												
1	2												
1	3												

Note: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" process (i.e., D99, S99, T04 and X99) in Item 8.

8. Other Processes (Follow instructions from Item 7 for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in sequence with Item 7)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	(2) Unit of Measure	C. Process Total Number of Units	For Official Use Only					
X	2	T	0	4	100.00	U	001						
	1	S	9	9	600	See Line 2	001						
	2				To be closed in accordance with Code of Federal Regulations (CFR), Title 40, Part 265, Subpart G. Permitted status is not requested. The unit of measure for capacity is gallons.								

7. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 7 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. PROCESS DESIGN CAPACITY (2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	1	S	0	2	533.788	G	001	
					Technical Area 54, Area G			
	1	S	0	1	4,346,590	G	009	
	2	S	0	1	4,950	See Line 4	001	
	3	D	8	0	14	See Line 5	001	
	4				To be closed in accordance with Code of Federal Regulations (CFR), Title 40, Part 265, Subpart G. Permitted status is not requested. The unit of measure for capacity is gallons.			
	5				To be closed in accordance with Code of Federal Regulations (CFR), Title 40, Part 265, Subpart G. Permitted status is not requested. The unit of measure for capacity is cubic yards.			
	6							
	7							
	8							
	9							
1	0							
1	1							
1	2							
1	3							

Note: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" process (i.e., D99, S99, T04 and X99) in Item 8.

8. Other Processes (Follow instructions from Item 7 for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in sequence with Item 7)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	(2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	2	T	0	4	100.00	U	001	

7. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 7 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. PROCESS DESIGN CAPACITY (2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	1	S	0	2	533.788	G	001	
					Technical Area 54 West			
	1	S	0	1	47,520	G	002	
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
1	0							
1	1							
1	2							
1	3							

Note: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" process (i.e., D99, S99, T04 and X99) in Item 8.

8. Other Processes (Follow instructions from Item 7 for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in sequence with Item 7)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	(2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	2	T	0	4	100.00	U	001	

7. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 7 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. PROCESS DESIGN CAPACITY (2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	1	S	0	2	533.788	G	001	
					Technical Area 54, Material Disposal Area H			
	1	D	8	0	63	See Line 2	001	
	2				To be closed in accordance with Code of Federal Regulations (CFR), Title 40, Part 265, Subpart G. Permitted status is not requested. The unit of measure for capacity is cubic yards.			
	3							
	4							
	5							
	6							
	7							
	8							
	9							
1	0							
1	1							
1	2							
1	3							

Note: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" process (i.e., D99, S99, T04 and X99) in Item 8.

8. Other Processes (Follow instructions from Item 7 for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in sequence with Item 7)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	(2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	2	T	0	4	100.00	U	001	

7. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 7 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	B. PROCESS DESIGN CAPACITY (2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	**1**	**S**	**0**	**2**	**533.788**	**G**	**001**	
					Technical Area 55			
	1	S	0	1	207,600	G	007	
	2	S	0	2	137	G	001	
	3							
	4							
	5							
	6							
	7							
	8							
	9							
1	**0**							
1	**1**							
1	**2**							
1	**3**							

Note: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" process (i.e., D99, S99, T04 and X99) in Item 8.

8. Other Processes (Follow instructions from Item 7 for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in sequence with Item 7)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY (1) Amount (Specify)	(2) Unit of Measure	C. Process Total Number of Units	For Official Use Only
X	**2**	**T**	**0**	**4**	**100.00**	**U**	**001**	
	3	T	0	4	150	G	001	

9. Description of Hazardous Wastes – Enter information in the Sections on Form Page 5

A. EPA HAZARDOUS WASTE NUMBER – Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR 261, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY – For each listed waste entered in Item 9.A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in Item 9.A, estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE – For each quantity entered in Item 9.B, enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure, taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in Item 9.A, select the code(s) from the list of process codes contained in Items 7.A and 8.A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the listed hazardous wastes.

For non-listed waste: For each characteristic or toxic contaminant entered in Item 9.A, select the code(s) from the list of process codes contained in Items 7.A and 8.A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. Enter the first two as described above.

2. Enter "000" in the extreme right box of Item 9.D(1).

3. Use additional sheet, enter line number from previous sheet, and enter additional code(s) in Item 9.E.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in Item 9.D(2) or in Item 9.E(2).

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER – Hazardous waste that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in Item 9.A. On the same line complete Items 9.B, 9.C, and 9.D by estimating the total annual quantity of the waste and describing all the processes to be used to store, treat, and/or dispose of the waste.

2. In Item 9.A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In Item 9.D.2 on that line enter "included with above" and make no other entries on that line.

3. Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING Item 9 (shown in line numbers X-1, X-2, X-3, and X-4 below) – A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operations. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)									D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
X	1	K	0	5	4	900	P	T	0	3	D	8	0				
X	2	D	0	0	2	400	P	T	0	3	D	8	0				
X	3	D	0	0	1	100	P	T	0	3	D	8	0				
X	4	D	0	0	2												Included With Above

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 3					
	1	D 0 0 1	7,000	P S 0 1	
	2	D 0 0 2	21,000	P S 0 1	
	3	D 0 0 3	2,500	P S 0 1	
	4	D 0 0 4	3,000	P S 0 1	
	5	D 0 0 5	3,000	P S 0 1	
	6	D 0 0 6	2,500	P S 0 1	
	7	D 0 0 7	7,000	P S 0 1	
	8	D 0 0 8	27,000	P S 0 1	
	9	D 0 0 9	4,000	P S 0 1	
1	0	D 0 1 0	2,500	P S 0 1	
1	1	D 0 1 1	3,000	P S 0 1	
1	2	D 0 1 2	1,000	P S 0 1	
1	3	D 0 1 8	1,500	P S 0 1	
1	4	D 0 1 9	2,000	P S 0 1	
1	5	D 0 2 1	2,000	P S 0 1	
1	6	D 0 2 2	2,000	P S 0 1	
1	7	D 0 2 3	2,000	P S 0 1	
1	8	D 0 2 4	2,000	P S 0 1	
1	9	D 0 2 5	2,000	P S 0 1	
2	0	D 0 2 6	2,000	P S 0 1	
2	1	D 0 2 7	1,500	P S 0 1	
2	2	D 0 2 8	2,000	P S 0 1	
2	3	D 0 2 9	1,000	P S 0 1	
2	4	D 0 3 0	1,500	P S 0 1	
2	5	D 0 3 2	1,500	P S 0 1	
2	6	D 0 3 3	1,500	P S 0 1	
2	7	D 0 3 4	1,500	P S 0 1	
2	8	D 0 3 5	3,500	P S 0 1	
2	9	D 0 3 6	1,500	P S 0 1	
3	0	D 0 3 7	1,000	P S 0 1	
3	1	D 0 3 8	1,500	P S 0 1	
3	2	D 0 3 9	2,500	P S 0 1	
3	3	D 0 4 0	2,500	P S 0 1	
3	4	D 0 4 2	1,500	P S 0 1	
3	5	D 0 4 3	1,500	P S 0 1	
3	6	F 0 0 1	21,000	P S 0 1	
3	7	F 0 0 2	21,000	P S 0 1	
3	8	F 0 0 3	21,000	P S 0 1	
3	9	F 0 0 4	2,500	P S 0 1	

9. Descriptions of Hazardous Wastes ***(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)***

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 3 (Continued)																	
4	0	F	0	0	5	21,000	P	S	0	1							
4	1	F	0	0	6	500	P	S	0	1							
4	2	F	0	0	7	500	P	S	0	1							
4	3	F	0	0	9	500	P	S	0	1							
4	4	P	0	0	3	1,000	P	S	0	1							
4	5	P	0	1	2	1,000	P	S	0	1							
4	6	P	0	1	5	1,000	P	S	0	1							
4	7	P	0	2	9	1,000	P	S	0	1							
4	8	P	0	3	0	1,000	P	S	0	1							
4	9	P	0	3	1	1,000	P	S	0	1							
5	0	P	0	3	8	1,000	P	S	0	1							
5	1	P	0	5	6	1,000	P	S	0	1							
5	2	P	0	6	3	1,000	P	S	0	1							
5	3	P	0	6	8	1,000	P	S	0	1							
5	4	P	0	7	3	1,000	P	S	0	1							
5	5	P	0	7	6	1,000	P	S	0	1							
5	6	P	0	7	8	1,000	P	S	0	1							
5	7	P	0	9	5	1,000	P	S	0	1							
5	8	P	0	9	6	1,000	P	S	0	1							
5	9	P	0	9	8	1,000	P	S	0	1							
6	0	P	0	9	9	500	P	S	0	1							
6	1	P	1	0	6	1,000	P	S	0	1							
6	2	P	1	1	3	1,000	P	S	0	1							
6	3	P	1	2	0	1,000	P	S	0	1							
6	4	U	0	0	1	1,000	P	S	0	1							
6	5	U	0	0	2	1,000	P	S	0	1							
6	6	U	0	0	3	1,000	P	S	0	1							
6	7	U	0	1	2	1,000	P	S	0	1							
6	8	U	0	1	9	1,000	P	S	0	1							
6	9	U	0	2	2	1,000	P	S	0	1							
7	0	U	0	2	9	1,000	P	S	0	1							
7	1	U	0	3	1	1,000	P	S	0	1							
7	2	U	0	3	7	1,000	P	S	0	1							
7	3	U	0	4	4	1,000	P	S	0	1							
7	4	U	0	4	5	1,000	P	S	0	1							
7	5	U	0	5	2	1,000	P	S	0	1							
7	6	U	0	5	6	1,000	P	S	0	1							
7	7	U	0	5	7	1,000	P	S	0	1							
7	8	U	0	7	5	1,000	P	S	0	1							

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 3 (Continued)					
7 9	U 0 7 7	1,000	P	S 0 1	
8 0	U 0 8 0	1,000	P	S 0 1	
8 1	U 1 0 8	1,000	P	S 0 1	
8 2	U 1 0 3	500	P	S 0 1	
8 3	U 1 1 2	1,000	P	S 0 1	
8 4	U 1 1 5	1,000	P	S 0 1	
8 5	U 1 1 7	1,000	P	S 0 1	
8 6	U 1 2 1	1,000	P	S 0 1	
8 7	U 1 2 2	1,000	P	S 0 1	
8 8	U 1 2 3	1,000	P	S 0 1	
8 9	U 1 3 1	1,000	P	S 0 1	
9 0	U 1 3 3	1,000	P	S 0 1	
9 1	U 1 3 4	1,000	P	S 0 1	
9 2	U 1 3 5	1,000	P	S 0 1	
9 3	U 1 4 0	1,000	P	S 0 1	
9 4	U 1 4 4	1,000	P	S 0 1	
9 5	U 1 5 1	1,000	P	S 0 1	
9 6	U 1 5 4	1,000	P	S 0 1	
9 7	U 1 5 9	1,000	P	S 0 1	
9 8	U 1 6 0	1,000	P	S 0 1	
9 9	U 1 6 1	1,000	P	S 0 1	
1 0 0	U 1 6 5	1,000	P	S 0 1	
1 0 1	U 1 6 9	1,000	P	S 0 1	
1 0 2	U 1 8 8	1,000	P	S 0 1	
1 0 3	U 1 9 0	1,000	P	S 0 1	
1 0 4	U 1 9 6	1,000	P	S 0 1	
1 0 5	U 2 0 4	1,000	P	S 0 1	
1 0 6	U 2 1 0	1,000	P	S 0 1	
1 0 7	U 2 1 1	1,000	P	S 0 1	
1 0 8	U 2 1 3	1,000	P	S 0 1	
1 0 9	U 2 1 6	1,000	P	S 0 1	
1 1 0	U 2 1 8	1,000	P	S 0 1	
1 1 1	U 2 1 9	1,000	P	S 0 1	
1 1 2	U 2 2 0	1,000	P	S 0 1	
1 1 3	U 2 2 5	500	P	S 0 1	
1 1 4	U 2 2 6	1,000	P	S 0 1	
1 1 5	U 2 2 7	500	P	S 0 1	
1 1 6	U 2 2 8	1,000	P	S 0 1	
1 1 7	U 2 3 9	500	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 3 (Continued)					
1 1 8	U 2 4 6	500	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 14																	
	1	D	0	0	1	2,000	P	X	0	1							
	2	D	0	0	3												Included with above.
	3	D	0	0	5												Included with above.
	4	D	0	0	6												Included with above.
	5	D	0	0	7												Included with above.
	6	D	0	0	8												Included with above.
	7	D	0	0	9												Included with above.
	8	D	0	1	1												Included with above.
	9	D	0	1	8												Included with above.
1	0	D	0	2	2												Included with above.
1	1	D	0	2	8												Included with above.
1	2	D	0	2	9												Included with above.
1	3	D	0	3	0												Included with above.
1	4	D	0	3	5												Included with above.
1	5	D	0	3	6												Included with above.
1	6	D	0	3	8												Included with above.
1	7	D	0	4	0												Included with above.
1	8	F	0	0	1												Included with above.
1	9	F	0	0	2												Included with above.
2	0	F	0	0	3												Included with above.
2	1	F	0	0	4												Included with above.
2	2	F	0	0	5												Included with above.
2	3																
2	4																
2	5																
2	6																
2	7																
2	8																
2	9																
3	0																
3	1																
3	2																
3	3																
3	4																
3	5																
3	6																
3	7																
3	8																
3	9																

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 16					
	1 D 0 0 1	20,000	P	X 0 1	
	2 D 0 0 2				Included with above.
	3 D 0 0 3				Included with above.
	4 D 0 0 5				Included with above.
	5 D 0 0 6				Included with above.
	6 D 0 0 7				Included with above.
	7 D 0 0 8				Included with above.
	8 D 0 0 9				Included with above.
	9 D 0 1 0				Included with above.
1	0 D 0 1 1				Included with above.
1	1 D 0 1 8				Included with above.
1	2 D 0 2 2				Included with above.
1	3 D 0 2 8				Included with above.
1	4 D 0 2 9				Included with above.
1	5 D 0 3 0				Included with above.
1	6 D 0 3 5				Included with above.
1	7 D 0 3 6				Included with above.
1	8 D 0 3 8				Included with above.
1	9 D 0 4 0				Included with above.
2	0 F 0 0 1				Included with above.
2	1 F 0 0 2				Included with above.
2	2 F 0 0 3				Included with above.
2	3 F 0 0 4				Included with above.
2	4 F 0 0 5				Included with above.
2	5 K 0 4 4				Included with above.
2	6 K 0 4 5				Included with above.
2	7				
2	8				
2	9				
3	0				
3	1				
3	2				
3	3				
3	4				
3	5				
3	6				
3	7				
3	8				
3	9				

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 36																	
	1	D	0	0	1	15,000	P	X	0	1							
	2	D	0	0	3												Included with above.
	3	D	0	0	5												Included with above.
	4	D	0	0	6												Included with above.
	5	D	0	0	7												Included with above.
	6	D	0	0	8												Included with above.
	7	D	0	0	9												Included with above.
	8	D	0	1	0												Included with above.
	9	D	0	1	1												Included with above.
1	0	D	0	1	8												Included with above.
1	1	D	0	2	2												Included with above.
1	2	D	0	2	8												Included with above.
1	3	D	0	2	9												Included with above.
1	4	D	0	3	0												Included with above.
1	5	D	0	3	5												Included with above.
1	6	D	0	3	6												Included with above.
1	7	D	0	3	8												Included with above.
1	8	D	0	4	0												Included with above.
1	9	F	0	0	1												Included with above.
2	0	F	0	0	2												Included with above.
2	1	F	0	0	3												Included with above.
2	2	F	0	0	4												Included with above.
2	3	F	0	0	5												Included with above.
2	4																
2	5																
2	6																
2	7																
2	8																
2	9																
3	0																
3	1																
3	2																
3	3																
3	4																
3	5																
3	6																
3	7																
3	8																
3	9																

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 39																	
	1	D	0	0	1	15,000	P	X	0	1							
	2	D	0	0	3												Included with above.
	3	D	0	0	5												Included with above.
	4	D	0	0	6												Included with above.
	5	D	0	0	7												Included with above.
	6	D	0	0	8												Included with above.
	7	D	0	0	9												Included with above.
	8	D	0	1	0												Included with above.
	9	D	0	1	1												Included with above.
1	0	D	0	1	8												Included with above.
1	1	D	0	2	2												Included with above.
1	2	D	0	2	8												Included with above.
1	3	D	0	2	9												Included with above.
1	4	D	0	3	0												Included with above.
1	5	D	0	3	5												Included with above.
1	6	D	0	3	6												Included with above.
1	7	D	0	3	8												Included with above.
1	8	D	0	4	0												Included with above.
1	9	F	0	0	1												Included with above.
2	0	F	0	0	2												Included with above.
2	1	F	0	0	3												Included with above.
2	2	F	0	0	4												Included with above.
2	3	F	0	0	5												Included with above.
2	4																
2	5																
2	6																
2	7																
2	8																
2	9																
3	0																
3	1																
3	2																
3	3																
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3	6																
3	7																
3	8																
3	9																

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 50																	
	1	D	0	0	1	69,696	P	S	0	1							
	2	D	0	0	2	52,734	P	S	0	1							
	3	D	0	0	3	3,444	P	S	0	1							
	4	D	0	0	4	7,531	P	S	0	1							
	5	D	0	0	5	7,740	P	S	0	1							
	6	D	0	0	6	535, 451	P	S	0	1							
	7	D	0	0	7	567, 226	P	S	0	1							
	8	D	0	0	8	1,405,439	P	S	0	1							
	9	D	0	0	9	75,666	P	S	0	1							
1	0	D	0	1	0	8,922	P	S	0	1							
1	1	D	0	1	1	31,255	P	S	0	1							
1	2	D	0	1	2	100	P	S	0	1							
1	3	D	0	1	3	100	P	S	0	1							
1	4	D	0	1	4	100	P	S	0	1							
1	5	D	0	1	5	100	P	S	0	1							
1	6	D	0	1	6	44	P	S	0	1							
1	7	D	0	1	7	66	P	S	0	1							
1	8	D	0	1	8	5,535	P	S	0	1							
1	9	D	0	1	9	4,261	P	S	0	1							
2	0	D	0	2	0	100	P	S	0	1							
2	1	D	0	2	1	100	P	S	0	1							
2	2	D	0	2	2	100	P	S	0	1							
2	3	D	0	2	3	100	P	S	0	1							
2	4	D	0	2	4	100	P	S	0	1							
2	5	D	0	2	5	100	P	S	0	1							
2	6	D	0	2	6	518	P	S	0	1							
2	7	D	0	2	7	972	P	S	0	1							
2	8	D	0	2	8	216,783	P	S	0	1							
2	9	D	0	2	9	215,184	P	S	0	1							
3	0	D	0	3	0	5,491	P	S	0	1							
3	1	D	0	3	1	293	P	S	0	1							
3	2	D	0	3	2	3,135	P	S	0	1							
3	3	D	0	3	3	2,222	P	S	0	1							
3	4	D	0	3	4	1,228	P	S	0	1							
3	5	D	0	3	5	1,792	P	S	0	1							
3	6	D	0	3	6	549	P	S	0	1							
3	7	D	0	3	7	761	P	S	0	1							
3	8	D	0	3	8	1,549	P	S	0	1							
3	9	D	0	3	9	1,675	P	S	0	1							

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)												D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 50 (Continued)																
4 0	D 0 4 0	3,942	P	S	0	1										
4 1	D 0 4 1	293	P	S	0	1										
4 2	D 0 4 2	1,182	P	S	0	1										
4 3	D 0 4 3	655	P	S	0	1										
4 4	F 0 0 1	442,263	P	S	0	1										
4 5	F 0 0 2	147,347	P	S	0	1										
4 6	F 0 0 3	50,980	P	S	0	1										
4 7	F 0 0 4	2,817	P	S	0	1										
4 8	F 0 0 5	334,821	P	S	0	1										
4 9	F 0 0 6	100	P	S	0	1										
5 0	F 0 0 7	100	P	S	0	1										
5 1	F 0 0 8	100	P	S	0	1										
5 2	F 0 0 9	165	P	S	0	1										
5 3	F 0 1 0	100	P	S	0	1										
5 4	F 0 1 1	100	P	S	0	1										
5 5	F 0 1 2	100	P	S	0	1										
5 6	F 0 1 9	100	P	S	0	1										
5 7	F 0 2 0	100	P	S	0	1										
5 8	F 0 2 1	100	P	S	0	1										
5 9	F 0 2 2	100	P	S	0	1										
6 0	F 0 2 3	100	P	S	0	1										
6 1	F 0 2 4	100	P	S	0	1										
6 2	F 0 2 5	100	P	S	0	1										
6 3	F 0 2 6	100	P	S	0	1										
6 4	F 0 2 7	165	P	S	0	1										
6 5	F 0 2 8	100	P	S	0	1										
6 6	F 0 3 2	100	P	S	0	1										
6 7	F 0 3 4	100	P	S	0	1										
6 8	F 0 3 5	100	P	S	0	1										
6 9	F 0 3 7	100	P	S	0	1										
7 0	F 0 3 8	100	P	S	0	1										
7 1	F 0 3 9	100	P	S	0	1										
7 2	K 0 4 4	100	P	S	0	1										
7 3	K 0 4 5	100	P	S	0	1										
7 4	K 0 4 6	100	P	S	0	1										
7 5	K 0 4 7	100	P	S	0	1										
7 6	K 0 8 4	100	P	S	0	1										
7 7	K 1 0 1	100	P	S	0	1										
7 8	K 1 0 2	100	P	S	0	1										

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 50 (Continued)					
7 9	P 0 0 1	100	P	S 0 1	
8 0	P 0 0 2	100	P	S 0 1	
8 1	P 0 0 3	293	P	S 0 1	
8 2	P 0 0 4	100	P	S 0 1	
8 3	P 0 0 5	100	P	S 0 1	
8 4	P 0 0 6	143	P	S 0 1	
8 5	P 0 0 7	100	P	S 0 1	
8 6	P 0 0 8	100	P	S 0 1	
8 7	P 0 0 9	100	P	S 0 1	
8 8	P 0 1 0	100	P	S 0 1	
8 9	P 0 1 1	143	P	S 0 1	
9 0	P 0 1 2	293	P	S 0 1	
9 1	P 0 1 3	100	P	S 0 1	
9 2	P 0 1 4	100	P	S 0 1	
9 3	P 0 1 5	293	P	S 0 1	
9 4	P 0 1 6	100	P	S 0 1	
9 5	P 0 1 7	100	P	S 0 1	
9 6	P 0 1 8	100	P	S 0 1	
9 7	P 0 2 0	100	P	S 0 1	
9 8	P 0 2 1	100	P	S 0 1	
9 9	P 0 2 2	100	P	S 0 1	
1 0 0	P 0 2 3	100	P	S 0 1	
1 0 1	P 0 2 4	100	P	S 0 1	
1 0 2	P 0 2 6	100	P	S 0 1	
1 0 3	P 0 2 7	100	P	S 0 1	
1 0 4	P 0 2 8	100	P	S 0 1	
1 0 5	P 0 2 9	293	P	S 0 1	
1 0 6	P 0 3 0	485	P	S 0 1	
1 0 7	P 0 3 1	485	P	S 0 1	
1 0 8	P 0 3 3	143	P	S 0 1	
1 0 9	P 0 3 4	100	P	S 0 1	
1 1 0	P 0 3 6	100	P	S 0 1	
1 1 1	P 0 3 7	100	P	S 0 1	
1 1 2	P 0 3 8	227	P	S 0 1	
1 1 3	P 0 3 9	100	P	S 0 1	
1 1 4	P 0 4 0	100	P	S 0 1	
1 1 5	P 0 4 1	100	P	S 0 1	
1 1 6	P 0 4 2	100	P	S 0 1	
1 1 7	P 0 4 3	143	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 50 (Continued)					
1 1 8	P 0 4 4	100	P	S 0 1	
1 1 9	P 0 4 5	100	P	S 0 1	
1 2 0	P 0 4 6	100	P	S 0 1	
1 2 1	P 0 4 7	100	P	S 0 1	
1 2 2	P 0 4 8	143	P	S 0 1	
1 2 3	P 0 4 9	100	P	S 0 1	
1 2 4	P 0 5 0	100	P	S 0 1	
1 2 5	P 0 5 1	100	P	S 0 1	
1 2 6	P 0 5 4	100	P	S 0 1	
1 2 7	P 0 5 6	2,624	P	S 0 1	
1 2 8	P 0 5 7	100	P	S 0 1	
1 2 9	P 0 5 8	100	P	S 0 1	
1 3 0	P 0 5 9	100	P	S 0 1	
1 3 1	P 0 6 0	100	P	S 0 1	
1 3 2	P 0 6 2	100	P	S 0 1	
1 3 3	P 0 6 3	293	P	S 0 1	
1 3 4	P 0 6 4	100	P	S 0 1	
1 3 5	P 0 6 5	100	P	S 0 1	
1 3 6	P 0 6 6	100	P	S 0 1	
1 3 7	P 0 6 7	100	P	S 0 1	
1 3 8	P 0 6 8	293	P	S 0 1	
1 3 9	P 0 6 9	100	P	S 0 1	
1 4 0	P 0 7 0	100	P	S 0 1	
1 4 1	P 0 7 1	100	P	S 0 1	
1 4 2	P 0 7 2	100	P	S 0 1	
1 4 3	P 0 7 3	293	P	S 0 1	
1 4 4	P 0 7 4	100	P	S 0 1	
1 4 5	P 0 7 5	100	P	S 0 1	
1 4 6	P 0 7 6	403	P	S 0 1	
1 4 7	P 0 7 7	100	P	S 0 1	
1 4 8	P 0 7 8	425	P	S 0 1	
1 4 9	P 0 8 1	100	P	S 0 1	
1 5 0	P 0 8 2	100	P	S 0 1	
1 5 1	P 0 8 4	100	P	S 0 1	
1 5 2	P 0 8 5	100	P	S 0 1	
1 5 3	P 0 8 7	100	P	S 0 1	
1 5 4	P 0 8 8	100	P	S 0 1	
1 5 5	P 0 8 9	100	P	S 0 1	
1 5 6	P 0 9 2	143	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 50 (Continued)					
1 5 7	P 0 9 3	100	P	S 0 1	
1 5 8	P 0 9 4	100	P	S 0 1	
1 5 9	P 0 9 5	293	P	S 0 1	
1 6 0	P 0 9 6	293	P	S 0 1	
1 6 1	P 0 9 7	100	P	S 0 1	
1 6 2	P 0 9 8	293	P	S 0 1	
1 6 3	P 0 9 9	100	P	S 0 1	
1 6 4	P 1 0 1	100	P	S 0 1	
1 6 5	P 1 0 2	100	P	S 0 1	
1 6 6	P 1 0 3	100	P	S 0 1	
1 6 7	P 1 0 4	143	P	S 0 1	
1 6 8	P 1 0 5	143	P	S 0 1	
1 6 9	P 1 0 6	293	P	S 0 1	
1 7 0	P 1 0 8	100	P	S 0 1	
1 7 1	P 1 0 9	100	P	S 0 1	
1 7 2	P 1 1 0	100	P	S 0 1	
1 7 3	P 1 1 1	100	P	S 0 1	
1 7 4	P 1 1 2	143	P	S 0 1	
1 7 5	P 1 1 3	293	P	S 0 1	
1 7 6	P 1 1 4	100	P	S 0 1	
1 7 7	P 1 1 5	100	P	S 0 1	
1 7 8	P 1 1 6	100	P	S 0 1	
1 7 9	P 1 1 8	100	P	S 0 1	
1 8 0	P 1 1 9	143	P	S 0 1	
1 8 1	P 1 2 0	293	P	S 0 1	
1 8 2	P 1 2 1	100	P	S 0 1	
1 8 3	P 1 2 2	100	P	S 0 1	
1 8 4	P 1 2 3	100	P	S 0 1	
1 8 5	P 1 2 7	100	P	S 0 1	
1 8 6	P 1 2 8	100	P	S 0 1	
1 8 7	P 1 8 5	100	P	S 0 1	
1 8 8	P 1 8 8	100	P	S 0 1	
1 8 9	P 1 8 9	100	P	S 0 1	
1 9 0	P 1 9 0	100	P	S 0 1	
1 9 1	P 1 9 1	100	P	S 0 1	
1 9 2	P 1 9 2	100	P	S 0 1	
1 9 3	P 1 9 4	100	P	S 0 1	
1 9 4	P 1 9 6	100	P	S 0 1	
1 9 5	P 1 9 7	100	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 50 (Continued)					
1	9 6 P 1 9 8	100	P	S 0 1	
1	9 7 P 1 9 9	100	P	S 0 1	
1	9 8 P 2 0 1	100	P	S 0 1	
1	9 9 P 2 0 2	100	P	S 0 1	
2	0 0 P 2 0 3	100	P	S 0 1	
2	0 1 P 2 0 4	100	P	S 0 1	
2	0 2 P 2 0 5	100	P	S 0 1	
2	0 3 U 0 0 1	293	P	S 0 1	
2	0 4 U 0 0 2	954	P	S 0 1	
2	0 5 U 0 0 3	485	P	S 0 1	
2	0 6 U 0 0 4	100	P	S 0 1	
2	0 7 U 0 0 5	100	P	S 0 1	
2	0 8 U 0 0 6	100	P	S 0 1	
2	0 9 U 0 0 7	143	P	S 0 1	
2	1 0 U 0 0 8	143	P	S 0 1	
2	1 1 U 0 0 9	143	P	S 0 1	
2	1 2 U 0 1 0	100	P	S 0 1	
2	1 3 U 0 1 1	100	P	S 0 1	
2	1 4 U 0 1 2	293	P	S 0 1	
2	1 5 U 0 1 4	100	P	S 0 1	
2	1 6 U 0 1 5	100	P	S 0 1	
2	1 7 U 0 1 6	100	P	S 0 1	
2	1 8 U 0 1 7	100	P	S 0 1	
2	1 9 U 0 1 8	143	P	S 0 1	
2	2 0 U 0 1 9	470	P	S 0 1	
2	2 1 U 0 2 0	100	P	S 0 1	
2	2 2 U 0 2 1	100	P	S 0 1	
2	2 3 U 0 2 2	293	P	S 0 1	
2	2 4 U 0 2 3	100	P	S 0 1	
2	2 5 U 0 2 4	100	P	S 0 1	
2	2 6 U 0 2 5	100	P	S 0 1	
2	2 7 U 0 2 6	100	P	S 0 1	
2	2 8 U 0 2 7	100	P	S 0 1	
2	2 9 U 0 2 8	100	P	S 0 1	
2	3 0 U 0 2 9	293	P	S 0 1	
2	3 1 U 0 3 0	100	P	S 0 1	
2	3 2 U 0 3 1	293	P	S 0 1	
2	3 3 U 0 3 2	100	P	S 0 1	
2	3 4 U 0 3 3	143	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 50 (Continued)					
235	U035	100	P	S01	
236	U036	100	P	S01	
237	U037	100	P	S01	
238	U038	143	P	S01	
239	U039	100	P	S01	
240	U039	100	P	S01	
241	U041	143	P	S01	
242	U042	100	P	S01	
243	U043	100	P	S01	
244	U044	293	P	S01	
245	U045	293	P	S01	
246	U046	100	P	S01	
247	U047	100	P	S01	
248	U048	100	P	S01	
249	U049	100	P	S01	
250	U050	100	P	S01	
251	U051	100	P	S01	
252	U052	293	P	S01	
253	U053	100	P	S01	
254	U054	143	P	S01	
255	U055	293	P	S01	
256	U056	293	P	S01	
257	U057	100	P	S01	
258	U058	100	P	S01	
259	U059	100	P	S01	
260	U060	100	P	S01	
261	U061	100	P	S01	
262	U062	100	P	S01	
263	U063	100	P	S01	
264	U064	100	P	S01	
265	U065	143	P	S01	
266	U066	100	P	S01	
267	U067	100	P	S01	
268	U068	165	P	S01	
269	U069	100	P	S01	
270	U070	100	P	S01	
271	U071	100	P	S01	
272	U072	100	P	S01	
273	U073	381	P	S01	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 50 (Continued)					
274	U076	100	P	S01	
275	U077	293	P	S01	
276	U078	100	P	S01	
277	U079	100	P	S01	
278	U080	4,129	P	S01	
279	U081	100	P	S01	
280	U082	100	P	S01	
281	U083	100	P	S01	
282	U084	100	P	S01	
283	U085	143	P	S01	
284	U086	100	P	S01	
285	U087	100	P	S01	
286	U088	100	P	S01	
287	U089	100	P	S01	
288	U090	518	P	S01	
290	U091	143	P	S01	
291	U092	100	P	S01	
292	U093	100	P	S01	
293	U094	100	P	S01	
294	U095	100	P	S01	
295	U096	100	P	S01	
296	U097	100	P	S01	
297	U098	100	P	S01	
298	U099	100	P	S01	
299	U100	143	P	S01	
301	U101	100	P	S01	
302	U102	100	P	S01	
303	U103	100	P	S01	
304	U104	293	P	S01	
305	U105	143	P	S01	
306	U106	100	P	S01	
307	U107	100	P	S01	
308	U108	293	P	S01	
309	U109	100	P	S01	
310	U110	100	P	S01	
311	U111	293	P	S01	
312	U112	100	P	S01	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 50 (Continued)					
3 1 3	U 1 1 7	293	P	S 0 1	
3 1 4	U 1 1 8	100	P	S 0 1	
3 1 5	U 1 1 9	100	P	S 0 1	
3 1 6	U 1 2 0	100	P	S 0 1	
3 1 7	U 1 2 1	293	P	S 0 1	
3 1 8	U 1 2 2	778	P	S 0 1	
3 1 9	U 1 2 3	293	P	S 0 1	
3 2 0	U 1 2 4	143	P	S 0 1	
3 2 1	U 1 2 5	100	P	S 0 1	
3 2 2	U 1 2 6	100	P	S 0 1	
3 2 3	U 1 2 7	100	P	S 0 1	
3 2 4	U 1 2 8	100	P	S 0 1	
3 2 5	U 1 2 9	100	P	S 0 1	
3 2 6	U 1 3 0	100	P	S 0 1	
3 2 7	U 1 3 1	293	P	S 0 1	
3 2 8	U 1 3 2	100	P	S 0 1	
3 2 9	U 1 3 3	293	P	S 0 1	
3 3 0	U 1 3 4	667	P	S 0 1	
3 3 1	U 1 3 5	447	P	S 0 1	
3 3 2	U 1 3 6	143	P	S 0 1	
3 3 3	U 1 3 7	100	P	S 0 1	
3 3 4	U 1 3 8	100	P	S 0 1	
3 3 5	U 1 4 0	293	P	S 0 1	
3 3 6	U 1 4 1	100	P	S 0 1	
3 3 7	U 1 4 2	100	P	S 0 1	
3 3 8	U 1 4 3	100	P	S 0 1	
3 3 9	U 1 4 4	293	P	S 0 1	
3 4 0	U 1 4 5	293	P	S 0 1	
3 4 1	U 1 4 6	100	P	S 0 1	
3 4 2	U 1 4 7	100	P	S 0 1	
3 4 3	U 1 4 8	100	P	S 0 1	
3 4 4	U 1 4 9	100	P	S 0 1	
3 4 5	U 1 5 0	100	P	S 0 1	
3 4 6	U 1 5 1	884	P	S 0 1	
3 4 7	U 1 5 2	100	P	S 0 1	
3 4 8	U 1 5 3	143	P	S 0 1	
3 4 9	U 1 5 4	359	P	S 0 1	
3 5 0	U 1 5 5	100	P	S 0 1	
3 5 1	U 1 5 6	100	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 50 (Continued)					
3 5 2	U 1 5 7	100	P	S 0 1	
3 5 3	U 1 5 8	100	P	S 0 1	
3 5 4	U 1 5 9	315	P	S 0 1	
3 5 5	U 1 6 0	293	P	S 0 1	
3 5 6	U 1 6 1	470	P	S 0 1	
3 5 7	U 1 6 2	143	P	S 0 1	
3 5 8	U 1 6 3	143	P	S 0 1	
3 5 9	U 1 6 4	100	P	S 0 1	
3 6 0	U 1 6 5	293	P	S 0 1	
3 6 1	U 1 6 6	100	P	S 0 1	
3 6 2	U 1 6 7	143	P	S 0 1	
3 6 3	U 1 6 8	143	P	S 0 1	
3 6 4	U 1 6 9	293	P	S 0 1	
3 6 5	U 1 7 0	143	P	S 0 1	
3 6 6	U 1 7 1	100	P	S 0 1	
3 6 7	U 1 7 2	100	P	S 0 1	
3 6 8	U 1 7 3	100	P	S 0 1	
3 6 9	U 1 7 4	100	P	S 0 1	
3 7 0	U 1 7 6	100	P	S 0 1	
3 7 1	U 1 7 7	100	P	S 0 1	
3 7 2	U 1 7 8	100	P	S 0 1	
3 7 3	U 1 7 9	100	P	S 0 1	
3 7 4	U 1 8 0	100	P	S 0 1	
3 7 5	U 1 8 1	100	P	S 0 1	
3 7 6	U 1 8 2	100	P	S 0 1	
3 7 7	U 1 8 3	100	P	S 0 1	
3 7 8	U 1 8 4	100	P	S 0 1	
3 7 9	U 1 8 5	100	P	S 0 1	
3 8 0	U 1 8 6	100	P	S 0 1	
3 8 1	U 1 8 7	100	P	S 0 1	
3 8 2	U 1 8 8	293	P	S 0 1	
3 8 3	U 1 8 9	100	P	S 0 1	
3 8 4	U 1 9 0	293	P	S 0 1	
3 8 5	U 1 9 1	100	P	S 0 1	
3 8 6	U 1 9 2	100	P	S 0 1	
3 8 7	U 1 9 3	100	P	S 0 1	
3 8 8	U 1 9 4	100	P	S 0 1	
3 8 9	U 1 9 6	293	P	S 0 1	
3 5 2	U 1 9 7	100	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 50 (Continued)					
3 9 1	U 2 0 0	100	P	S 0 1	
3 9 2	U 2 0 1	100	P	S 0 1	
3 9 3	U 2 0 2	100	P	S 0 1	
3 9 4	U 2 0 3	100	P	S 0 1	
3 9 5	U 2 0 4	293	P	S 0 1	
3 9 6	U 2 0 5	100	P	S 0 1	
3 9 7	U 2 0 6	100	P	S 0 1	
3 9 8	U 2 0 7	100	P	S 0 1	
3 9 9	U 2 0 8	100	P	S 0 1	
4 0 0	U 2 0 9	100	P	S 0 1	
4 0 1	U 2 1 0	513	P	S 0 1	
4 0 2	U 2 1 1	359	P	S 0 1	
4 0 3	U 2 1 3	293	P	S 0 1	
4 0 4	U 2 1 4	100	P	S 0 1	
4 0 5	U 2 1 5	100	P	S 0 1	
4 0 6	U 2 1 6	293	P	S 0 1	
4 0 7	U 2 1 7	100	P	S 0 1	
4 0 8	U 2 1 8	293	P	S 0 1	
4 0 9	U 2 1 9	293	P	S 0 1	
4 1 0	U 2 2 0	491	P	S 0 1	
4 1 1	U 2 2 1	100	P	S 0 1	
4 1 2	U 2 2 2	100	P	S 0 1	
4 1 3	U 2 2 3	143	P	S 0 1	
4 1 4	U 2 2 5	293	P	S 0 1	
4 1 5	U 2 2 6	6,594	P	S 0 1	
4 1 6	U 2 2 7	293	P	S 0 1	
4 1 7	U 2 2 8	1,219	P	S 0 1	
4 1 8	U 2 3 4	100	P	S 0 1	
4 1 9	U 2 3 5	100	P	S 0 1	
4 2 0	U 2 3 6	100	P	S 0 1	
4 2 1	U 2 3 7	100	P	S 0 1	
4 2 2	U 2 3 8	100	P	S 0 1	
4 2 3	U 2 3 9	646	P	S 0 1	
4 2 4	U 2 4 0	143	P	S 0 1	
4 2 5	U 2 4 3	100	P	S 0 1	
4 2 6	U 2 4 4	100	P	S 0 1	
4 2 7	U 2 4 6	231	P	S 0 1	
4 2 8	U 2 4 7	100	P	S 0 1	
4 2 9	U 2 4 8	100	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 50 (Continued)					
430	U024	100	P	S01	
431	U027	100	P	S01	
432	U028	100	P	S01	
433	U029	100	P	S01	
434	U030	100	P	S01	
435	U032	100	P	S01	
436	U035	100	P	S01	
437	U036	100	P	S01	
438	U037	100	P	S01	
439	U038	100	P	S01	
440	U041	100	P	S01	
441	U043	100	P	S01	
442	U044	100	P	S01	
443	U045	100	P	S01	
444	U046	100	P	S01	
445	U047	100	P	S01	
446	U048	100	P	S01	
447	U049	100	P	S01	
448	U050	100	P	S01	
449	U051	100	P	S01	
450	U052	100	P	S01	
451	U053	100	P	S01	
452	U055	100	P	S01	
453	U056	100	P	S01	
454	U057	100	P	S01	
455	U058	100	P	S01	
456	U059	100	P	S01	
457	U060	100	P	S01	
458	U061	100	P	S01	
459	U062	100	P	S01	
460	U063	100	P	S01	
461	U064	100	P	S01	
462	U066	100	P	S01	
463	U067	100	P	S01	
464	U068	100	P	S01	
465	U069	100	P	S01	
466	U070	100	P	S01	
467	U071	100	P	S01	
468	U072	100	P	S01	
469	U073	100	P	S01	
470	U074	100	P	S01	
471	U075	100	P	S01	
472	U076	100	P	S01	
473	U077	100	P	S01	
474	U078	100	P	S01	
475	U079	100	P	S01	
476	U080	100	P	S01	
477	U081	100	P	S01	
478	U082	100	P	S01	
479	U083	100	P	S01	
480	U084	100	P	S01	
481	U085	100	P	S01	
482	U086	100	P	S01	
483	U087	100	P	S01	
484	U088	100	P	S01	
430					
431					
432					
433					
434					
435					
436					
437					
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9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)					B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area L																	
	1	D	0	0	1	220,000	P	S	0	1							
	2	D	0	0	2	365,000	P	S	0	1							
	3	D	0	0	3	100,000	P	S	0	1							
	4	D	0	0	4	25,000	P	S	0	1							
	5	D	0	0	5	80,000	P	S	0	1							
	6	D	0	0	6	65,000	P	S	0	1							
	7	D	0	0	7	75,000	P	S	0	1							
	8	D	0	0	8	800,000	P	S	0	1							
	9	D	0	0	9	65,000	P	S	0	1							
1	0	D	0	1	0	30,000	P	S	0	1							
1	1	D	0	1	1	40,000	P	S	0	1							
1	2	D	0	1	2	12,000	P	S	0	1							
1	3	D	0	1	3	4,000	P	S	0	1							
1	4	D	0	1	4	4,000	P	S	0	1							
1	5	D	0	1	5	7,000	P	S	0	1							
1	6	D	0	1	6	4,000	P	S	0	1							
1	7	D	0	1	7	4,000	P	S	0	1							
1	8	D	0	1	8	20,000	P	S	0	1							
1	9	D	0	1	9	20,000	P	S	0	1							
2	0	D	0	2	0	30,000	P	S	0	1							
2	1	D	0	2	1	10,000	P	S	0	1							
2	2	D	0	2	2	23,000	P	S	0	1							
2	3	D	0	2	3	4,000	P	S	0	1							
2	4	D	0	2	4	4,000	P	S	0	1							
2	5	D	0	2	5	4,000	P	S	0	1							
2	6	D	0	2	6	4,000	P	S	0	1							
2	7	D	0	2	7	12,000	P	S	0	1							
2	8	D	0	2	8	30,000	P	S	0	1							
2	9	D	0	2	9	7,000	P	S	0	1							
3	0	D	0	3	0	20000	P	S	0	1							
3	1	D	0	3	1	12000	P	S	0	1							
3	2	D	0	3	2	19000	P	S	0	1							
3	3	D	0	3	3	19000	P	S	0	1							
3	4	D	0	3	4	19000	P	S	0	1							
3	5	D	0	3	5	20000	P	S	0	1							
3	6	D	0	3	6	9000	P	S	0	1							
3	7	D	0	3	7	7000	P	S	0	1							
3	8	D	0	3	8	4000	P	S	0	1							
3	9	D	0	3	9	10000	P	S	0	1							

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)												D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area L (Continued)																
4 0	D 0 4 0	15000	P	S	0	1										
4 1	D 0 4 1	7000	P	S	0	1										
4 2	D 0 4 2	12000	P	S	0	1										
4 3	D 0 4 3	15000	P	S	0	1										
4 4	F 0 0 1	660000	P	S	0	1										
4 5	F 0 0 2	350000	P	S	0	1										
4 6	F 0 0 3	250000	P	S	0	1										
4 7	F 0 0 4	30000	P	S	0	1										
4 8	F 0 0 5	250000	P	S	0	1										
4 9	F 0 0 6	7000	P	S	0	1										
5 0	F 0 0 7	28000	P	S	0	1										
5 1	F 0 0 8	7000	P	S	0	1										
5 2	F 0 0 9	8000	P	S	0	1										
5 3	F 0 1 0	4000	P	S	0	1										
5 4	F 0 1 1	4000	P	S	0	1										
5 5	F 0 1 2	4000	P	S	0	1										
5 6	F 0 1 9	500	P	S	0	1										
5 7	F 0 2 0	500	P	S	0	1										
5 8	F 0 2 1	500	P	S	0	1										
5 9	F 0 2 2	500	P	S	0	1										
6 0	F 0 2 3	500	P	S	0	1										
6 1	F 0 2 4	500	P	S	0	1										
6 2	F 0 2 5	500	P	S	0	1										
6 3	F 0 2 6	500	P	S	0	1										
6 4	F 0 2 7	4000	P	S	0	1										
6 5	F 0 2 8	4000	P	S	0	1										
6 6	F 0 3 2	500	P	S	0	1										
6 7	F 0 3 4	500	P	S	0	1										
6 8	F 0 3 5	500	P	S	0	1										
6 9	F 0 3 7	500	P	S	0	1										
7 0	F 0 3 8	500	P	S	0	1										
7 1	F 0 3 9	4000	P	S	0	1										
7 2	K 0 4 4	22000	P	S	0	1										
7 3	K 0 4 5	4000	P	S	0	1										
7 4	K 0 4 6	4000	P	S	0	1										
7 5	K 0 4 7	4000	P	S	0	1										
7 6	K 0 8 4	500	P	S	0	1										
7 7	K 1 0 1	500	P	S	0	1										
7 8	K 1 0 2	500	P	S	0	1										

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number			A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
									(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area L (Continued)																		
	7	9	P	0	0	1	4,000	P	S	0	1							
	8	0	P	0	0	2	4,000	P	S	0	1							
	8	1	P	0	0	3	4,000	P	S	0	1							
	8	2	P	0	0	4	4,000	P	S	0	1							
	8	3	P	0	0	5	4,000	P	S	0	1							
	8	4	P	0	0	6	4,000	P	S	0	1							
	8	5	P	0	0	7	4,000	P	S	0	1							
	8	6	P	0	0	8	4,000	P	S	0	1							
	8	7	P	0	0	9	4,000	P	S	0	1							
	8	8	P	0	1	0	4,000	P	S	0	1							
	8	9	P	0	1	1	4,000	P	S	0	1							
	9	0	P	0	1	2	4,000	P	S	0	1							
	9	1	P	0	1	3	4,000	P	S	0	1							
	9	2	P	0	1	4	4,000	P	S	0	1							
	9	3	P	0	1	5	4,000	P	S	0	1							
	9	4	P	0	1	6	4,000	P	S	0	1							
	9	5	P	0	1	7	4,000	P	S	0	1							
	9	6	P	0	1	8	4,000	P	S	0	1							
	9	7	P	0	2	0	4,000	P	S	0	1							
	9	8	P	0	2	1	4,000	P	S	0	1							
	9	9	P	0	2	2	4,000	P	S	0	1							
1	0	0	P	0	2	3	4,000	P	S	0	1							
1	0	1	P	0	2	4	4,000	P	S	0	1							
1	0	2	P	0	2	6	4,000	P	S	0	1							
1	0	3	P	0	2	7	4,000	P	S	0	1							
1	0	4	P	0	2	8	4,000	P	S	0	1							
1	0	5	P	0	2	9	4,000	P	S	0	1							
1	0	6	P	0	3	0	4,000	P	S	0	1							
1	0	7	P	0	3	1	4,000	P	S	0	1							
1	0	8	P	0	3	3	4,000	P	S	0	1							
1	0	9	P	0	3	4	4,000	P	S	0	1							
1	1	0	P	0	3	6	4,000	P	S	0	1							
1	1	1	P	0	3	7	4,000	P	S	0	1							
1	1	2	P	0	3	8	4,000	P	S	0	1							
1	1	3	P	0	3	9	4,000	P	S	0	1							
1	1	4	P	0	4	0	4,000	P	S	0	1							
1	1	5	P	0	4	1	4,000	P	S	0	1							
1	1	6	P	0	4	2	4,000	P	S	0	1							
1	1	7	P	0	4	3	4,000	P	S	0	1							

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area L (Continued)					
1 1 8	P 0 4 4	4,000	P	S 0 1	
1 1 9	P 0 4 5	4,000	P	S 0 1	
1 2 0	P 0 4 6	4,000	P	S 0 1	
1 2 1	P 0 4 7	4,000	P	S 0 1	
1 2 2	P 0 4 8	4,000	P	S 0 1	
1 2 3	P 0 4 9	4,000	P	S 0 1	
1 2 4	P 0 5 0	4,000	P	S 0 1	
1 2 5	P 0 5 1	4,000	P	S 0 1	
1 2 6	P 0 5 4	4,000	P	S 0 1	
1 2 7	P 0 5 6	4,000	P	S 0 1	
1 2 8	P 0 5 7	4,000	P	S 0 1	
1 2 9	P 0 5 8	4,000	P	S 0 1	
1 3 0	P 0 5 9	4,000	P	S 0 1	
1 3 1	P 0 6 0	4,000	P	S 0 1	
1 3 2	P 0 6 2	4,000	P	S 0 1	
1 3 3	P 0 6 3	4,000	P	S 0 1	
1 3 4	P 0 6 4	4,000	P	S 0 1	
1 3 5	P 0 6 5	4,000	P	S 0 1	
1 3 6	P 0 6 6	4,000	P	S 0 1	
1 3 7	P 0 6 7	4,000	P	S 0 1	
1 3 8	P 0 6 8	4,000	P	S 0 1	
1 3 9	P 0 6 9	4,000	P	S 0 1	
1 4 0	P 0 7 0	4,000	P	S 0 1	
1 4 1	P 0 7 1	4,000	P	S 0 1	
1 4 2	P 0 7 2	4,000	P	S 0 1	
1 4 3	P 0 7 3	4,000	P	S 0 1	
1 4 4	P 0 7 4	4,000	P	S 0 1	
1 4 5	P 0 7 5	4,000	P	S 0 1	
1 4 6	P 0 7 6	4,000	P	S 0 1	
1 4 7	P 0 7 7	4,000	P	S 0 1	
1 4 8	P 0 7 8	4,000	P	S 0 1	
1 4 9	P 0 8 1	4,000	P	S 0 1	
1 5 0	P 0 8 2	4,000	P	S 0 1	
1 5 1	P 0 8 4	4,000	P	S 0 1	
1 5 2	P 0 8 5	4,000	P	S 0 1	
1 5 3	P 0 8 7	4,000	P	S 0 1	
1 5 4	P 0 8 8	4,000	P	S 0 1	
1 5 5	P 0 8 9	4,000	P	S 0 1	
1 5 6	P 0 9 2	4,000	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area L (Continued)					
157	P 0 9 3	4,000	P	S 0 1	
158	P 0 9 4	4,000	P	S 0 1	
159	P 0 9 5	4,000	P	S 0 1	
160	P 0 9 6	4,000	P	S 0 1	
161	P 0 9 7	4,000	P	S 0 1	
162	P 0 9 8	4,000	P	S 0 1	
163	P 0 9 9	4,000	P	S 0 1	
164	P 1 0 1	4,000	P	S 0 1	
165	P 1 0 2	4,000	P	S 0 1	
166	P 1 0 3	4,000	P	S 0 1	
167	P 1 0 4	4,000	P	S 0 1	
168	P 1 0 5	4,000	P	S 0 1	
169	P 1 0 6	4,000	P	S 0 1	
170	P 1 0 8	4,000	P	S 0 1	
171	P 1 0 9	4,000	P	S 0 1	
172	P 1 1 0	4,000	P	S 0 1	
173	P 1 1 1	4,000	P	S 0 1	
174	P 1 1 2	4,000	P	S 0 1	
175	P 1 1 3	4,000	P	S 0 1	
176	P 1 1 4	4,000	P	S 0 1	
177	P 1 1 5	4,000	P	S 0 1	
178	P 1 1 6	4,000	P	S 0 1	
179	P 1 1 8	4,000	P	S 0 1	
180	P 1 1 9	4,000	P	S 0 1	
181	P 1 2 0	4,000	P	S 0 1	
182	P 1 2 1	4,000	P	S 0 1	
183	P 1 2 2	4,000	P	S 0 1	
184	P 1 2 3	4,000	P	S 0 1	
185	P 1 2 7	4,000	P	S 0 1	
186	P 1 2 8	4,000	P	S 0 1	
187	P 1 8 5	4,000	P	S 0 1	
188	P 1 8 8	4,000	P	S 0 1	
189	P 1 8 9	4,000	P	S 0 1	
190	P 1 9 0	4,000	P	S 0 1	
191	P 1 9 1	4,000	P	S 0 1	
192	P 1 9 2	4,000	P	S 0 1	
193	P 1 9 3	4,000	P	S 0 1	
194	P 1 9 4	4,000	P	S 0 1	
195	P 1 9 6	4,000	P	S 0 1	
196	P 1 9 7	4,000	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area L (Continued)					
1 9 6	P 1 9 8	4,000	P	S 0 1	
1 9 7	P 1 9 9	4,000	P	S 0 1	
1 9 8	P 2 0 1	4,000	P	S 0 1	
1 9 9	P 2 0 2	4,000	P	S 0 1	
2 0 0	P 2 0 3	4,000	P	S 0 1	
2 0 1	P 2 0 4	4,000	P	S 0 1	
2 0 2	P 2 0 5	4,000	P	S 0 1	
2 0 3	U 0 0 1	4,000	P	S 0 1	
2 0 4	U 0 0 2	4,000	P	S 0 1	
2 0 5	U 0 0 3	4,000	P	S 0 1	
2 0 6	U 0 0 4	4,000	P	S 0 1	
2 0 7	U 0 0 5	4,000	P	S 0 1	
2 0 8	U 0 0 6	4,000	P	S 0 1	
2 0 9	U 0 0 7	4,000	P	S 0 1	
2 1 0	U 0 0 8	4,000	P	S 0 1	
2 1 1	U 0 0 9	4,000	P	S 0 1	
2 1 2	U 0 1 0	4,000	P	S 0 1	
2 1 3	U 0 1 1	4,000	P	S 0 1	
2 1 4	U 0 1 2	4,000	P	S 0 1	
2 1 5	U 0 1 4	4,000	P	S 0 1	
2 1 6	U 0 1 5	4,000	P	S 0 1	
2 1 7	U 0 1 6	4,000	P	S 0 1	
2 1 8	U 0 1 7	4,000	P	S 0 1	
2 1 9	U 0 1 8	4,000	P	S 0 1	
2 2 0	U 0 1 9	4,000	P	S 0 1	
2 2 1	U 0 2 0	4,000	P	S 0 1	
2 2 2	U 0 2 1	4,000	P	S 0 1	
2 2 3	U 0 2 2	4,000	P	S 0 1	
2 2 4	U 0 2 3	4,000	P	S 0 1	
2 2 5	U 0 2 4	4,000	P	S 0 1	
2 2 6	U 0 2 5	4,000	P	S 0 1	
2 2 7	U 0 2 6	4,000	P	S 0 1	
2 2 8	U 0 2 7	4,000	P	S 0 1	
2 2 9	U 0 2 8	4,000	P	S 0 1	
2 3 0	U 0 2 9	4,000	P	S 0 1	
2 3 1	U 0 3 0	4,000	P	S 0 1	
2 3 2	U 0 3 1	4,000	P	S 0 1	
2 3 3	U 0 3 2	4,000	P	S 0 1	
2 3 4	U 0 3 3	4,000	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area L (Continued)					
235	U035	4,000	P	S01	
236	U035	4,000	P	S01	
237	U036	4,000	P	S01	
238	U037	4,000	P	S01	
239	U038	4,000	P	S01	
240	U039	4,000	P	S01	
241	U041	4,000	P	S01	
242	U042	4,000	P	S01	
243	U043	4,000	P	S01	
244	U044	4,000	P	S01	
245	U045	4,000	P	S01	
246	U046	4,000	P	S01	
247	U047	4,000	P	S01	
248	U048	4,000	P	S01	
249	U049	4,000	P	S01	
250	U050	4,000	P	S01	
251	U051	4,000	P	S01	
252	U052	4,000	P	S01	
253	U053	4,000	P	S01	
254	U054	4,000	P	S01	
255	U055	4,000	P	S01	
256	U056	4,000	P	S01	
257	U057	4,000	P	S01	
258	U058	4,000	P	S01	
259	U059	4,000	P	S01	
260	U060	4,000	P	S01	
261	U061	4,000	P	S01	
262	U062	4,000	P	S01	
263	U063	4,000	P	S01	
264	U064	4,000	P	S01	
265	U065	4,000	P	S01	
266	U066	4,000	P	S01	
267	U067	4,000	P	S01	
268	U068	4,000	P	S01	
269	U069	4,000	P	S01	
270	U070	4,000	P	S01	
271	U071	4,000	P	S01	
272	U072	4,000	P	S01	
273	U073	4,000	P	S01	
274	U074	4,000	P	S01	
275	U075	4,000	P	S01	
276	U076	4,000	P	S01	
277	U077	4,000	P	S01	
278	U078	4,000	P	S01	
279	U079	4,000	P	S01	
280	U080	4,000	P	S01	
281	U081	4,000	P	S01	
282	U082	4,000	P	S01	
283	U083	4,000	P	S01	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area L (Continued)					
274	U 0 7 6	4,000	P	S 0 1	
275	U 0 7 7	4,000	P	S 0 1	
276	U 0 7 8	4,000	P	S 0 1	
277	U 0 7 9	4,000	P	S 0 1	
278	U 0 8 0	4,000	P	S 0 1	
279	U 0 8 1	4,000	P	S 0 1	
280	U 0 8 2	4,000	P	S 0 1	
281	U 0 8 3	4,000	P	S 0 1	
282	U 0 8 4	4,000	P	S 0 1	
283	U 0 8 5	4,000	P	S 0 1	
284	U 0 8 6	4,000	P	S 0 1	
285	U 0 8 7	4,000	P	S 0 1	
286	U 0 8 8	4,000	P	S 0 1	
287	U 0 8 9	4,000	P	S 0 1	
288	U 0 9 0	4,000	P	S 0 1	
289	U 0 9 1	4,000	P	S 0 1	
290	U 0 9 2	4,000	P	S 0 1	
291	U 0 9 3	4,000	P	S 0 1	
292	U 0 9 4	4,000	P	S 0 1	
293	U 0 9 5	4,000	P	S 0 1	
294	U 0 9 6	4,000	P	S 0 1	
295	U 0 9 7	4,000	P	S 0 1	
296	U 0 9 8	4,000	P	S 0 1	
297	U 0 9 9	4,000	P	S 0 1	
298	U 1 0 1	4,000	P	S 0 1	
299	U 1 0 2	4,000	P	S 0 1	
300	U 1 0 3	4,000	P	S 0 1	
301	U 1 0 5	4,000	P	S 0 1	
302	U 1 0 6	4,000	P	S 0 1	
303	U 1 0 7	4,000	P	S 0 1	
304	U 1 0 8	4,000	P	S 0 1	
305	U 1 0 9	4,000	P	S 0 1	
306	U 1 1 0	4,000	P	S 0 1	
307	U 1 1 1	4,000	P	S 0 1	
308	U 1 1 2	4,000	P	S 0 1	
309	U 1 1 3	4,000	P	S 0 1	
310	U 1 1 4	4,000	P	S 0 1	
311	U 1 1 5	4,000	P	S 0 1	
312	U 1 1 6	4,000	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area L (Continued)					
3 1 3	U 1 1 7	4,000	P	S 0 1	
3 1 4	U 1 1 8	4,000	P	S 0 1	
3 1 5	U 1 1 9	4,000	P	S 0 1	
3 1 6	U 1 2 0	4,000	P	S 0 1	
3 1 7	U 1 2 1	4,000	P	S 0 1	
3 1 8	U 1 2 2	4,000	P	S 0 1	
3 1 9	U 1 2 3	4,000	P	S 0 1	
3 2 0	U 1 2 4	4,000	P	S 0 1	
3 2 1	U 1 2 5	4,000	P	S 0 1	
3 2 2	U 1 2 6	4,000	P	S 0 1	
3 2 3	U 1 2 7	4,000	P	S 0 1	
3 2 4	U 1 2 8	4,000	P	S 0 1	
3 2 5	U 1 2 9	4,000	P	S 0 1	
3 2 6	U 1 3 0	4,000	P	S 0 1	
3 2 7	U 1 3 1	4,000	P	S 0 1	
3 2 8	U 1 3 2	4,000	P	S 0 1	
3 2 9	U 1 3 3	4,000	P	S 0 1	
3 3 0	U 1 3 4	4,000	P	S 0 1	
3 3 1	U 1 3 5	4,000	P	S 0 1	
3 3 2	U 1 3 6	4,000	P	S 0 1	
3 3 3	U 1 3 7	4,000	P	S 0 1	
3 3 4	U 1 3 8	4,000	P	S 0 1	
3 3 5	U 1 4 0	4,000	P	S 0 1	
3 3 6	U 1 4 1	4,000	P	S 0 1	
3 3 7	U 1 4 2	4,000	P	S 0 1	
3 3 8	U 1 4 3	4,000	P	S 0 1	
3 3 9	U 1 4 4	4,000	P	S 0 1	
3 4 0	U 1 4 5	4,000	P	S 0 1	
3 4 1	U 1 4 6	4,000	P	S 0 1	
3 4 2	U 1 4 7	4,000	P	S 0 1	
3 4 3	U 1 4 8	4,000	P	S 0 1	
3 4 4	U 1 4 9	4,000	P	S 0 1	
3 4 5	U 1 5 0	4,000	P	S 0 1	
3 4 6	U 1 5 1	4,000	P	S 0 1	
3 4 7	U 1 5 2	4,000	P	S 0 1	
3 4 8	U 1 5 3	4,000	P	S 0 1	
3 4 9	U 1 5 4	4,000	P	S 0 1	
3 5 0	U 1 5 5	4,000	P	S 0 1	
3 5 1	U 1 5 6	4,000	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area L (Continued)					
3 5 4	U 1 5 7	4,000	P	S 0 1	
3 5 5	U 1 5 8	4,000	P	S 0 1	
3 5 6	U 1 5 9	4,000	P	S 0 1	
3 5 7	U 1 6 0	4,000	P	S 0 1	
3 5 8	U 1 6 1	4,000	P	S 0 1	
3 5 9	U 1 6 2	4,000	P	S 0 1	
3 6 0	U 1 6 3	4,000	P	S 0 1	
3 6 1	U 1 6 4	4,000	P	S 0 1	
3 6 2	U 1 6 5	4,000	P	S 0 1	
3 6 3	U 1 6 6	4,000	P	S 0 1	
3 6 4	U 1 6 7	4,000	P	S 0 1	
3 6 5	U 1 6 8	4,000	P	S 0 1	
3 6 6	U 1 6 9	4,000	P	S 0 1	
3 6 7	U 1 7 0	4,000	P	S 0 1	
3 6 8	U 1 7 1	4,000	P	S 0 1	
3 6 9	U 1 7 2	4,000	P	S 0 1	
3 7 0	U 1 7 3	4,000	P	S 0 1	
3 7 1	U 1 7 4	4,000	P	S 0 1	
3 7 2	U 1 7 6	4,000	P	S 0 1	
3 7 3	U 1 7 7	4,000	P	S 0 1	
3 7 4	U 1 7 8	4,000	P	S 0 1	
3 7 5	U 1 7 9	4,000	P	S 0 1	
3 7 6	U 1 8 0	4,000	P	S 0 1	
3 7 7	U 1 8 1	4,000	P	S 0 1	
3 7 8	U 1 8 2	4,000	P	S 0 1	
3 7 9	U 1 8 3	4,000	P	S 0 1	
3 8 0	U 1 8 4	4,000	P	S 0 1	
3 8 1	U 1 8 5	4,000	P	S 0 1	
3 8 2	U 1 8 6	4,000	P	S 0 1	
3 8 3	U 1 8 7	4,000	P	S 0 1	
3 8 4	U 1 8 8	4,000	P	S 0 1	
3 8 5	U 1 8 9	4,000	P	S 0 1	
3 8 6	U 1 9 0	4,000	P	S 0 1	
3 8 7	U 1 9 1	4,000	P	S 0 1	
3 8 8	U 1 9 2	4,000	P	S 0 1	
3 8 9	U 1 9 3	4,000	P	S 0 1	
3 9 0	U 1 9 4	4,000	P	S 0 1	
3 5 4	U 1 9 6	4,000	P	S 0 1	
3 5 5	U 1 9 7	4,000	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area L (Continued)					
3 9 1	U 2 0 0	4,000	P	S 0 1	
3 9 2	U 2 0 1	4,000	P	S 0 1	
3 9 3	U 2 0 2	4,000	P	S 0 1	
3 9 4	U 2 0 3	4,000	P	S 0 1	
3 9 5	U 2 0 4	4,000	P	S 0 1	
3 9 6	U 2 0 5	4,000	P	S 0 1	
3 9 7	U 2 0 6	4,000	P	S 0 1	
3 9 8	U 2 0 7	4,000	P	S 0 1	
3 9 9	U 2 0 8	4,000	P	S 0 1	
4 0 0	U 2 0 9	4,000	P	S 0 1	
4 0 1	U 2 1 0	4,000	P	S 0 1	
4 0 2	U 2 1 1	4,000	P	S 0 1	
4 0 3	U 2 1 3	4,000	P	S 0 1	
4 0 4	U 2 1 4	4,000	P	S 0 1	
4 0 5	U 2 1 5	4,000	P	S 0 1	
4 0 6	U 2 1 6	4,000	P	S 0 1	
4 0 7	U 2 1 7	4,000	P	S 0 1	
4 0 8	U 2 1 8	4,000	P	S 0 1	
4 0 9	U 2 1 9	4,000	P	S 0 1	
4 1 0	U 2 2 0	7,000	P	S 0 1	
4 1 1	U 2 0 0	4,000	P	S 0 1	
4 1 2	U 2 0 1	4,000	P	S 0 1	
4 1 3	U 2 0 2	4,000	P	S 0 1	
4 1 4	U 2 0 3	4,000	P	S 0 1	
4 1 5	U 2 0 4	7,000	P	S 0 1	
4 1 6	U 2 0 5	4,000	P	S 0 1	
4 1 7	U 2 0 6	7,000	P	S 0 1	
4 1 8	U 2 0 7	4,000	P	S 0 1	
4 1 9	U 2 0 8	4,000	P	S 0 1	
4 2 0	U 2 0 9	4,000	P	S 0 1	
4 2 1	U 2 1 0	4,000	P	S 0 1	
4 2 2	U 2 1 1	4,000	P	S 0 1	
4 2 3	U 2 1 3	7,000	P	S 0 1	
4 2 4	U 2 1 4	4,000	P	S 0 1	
4 2 5	U 2 1 5	4,000	P	S 0 1	
4 2 6	U 2 1 6	4,000	P	S 0 1	
4 2 7	U 2 1 7	4,000	P	S 0 1	
4 2 8	U 2 1 8	4,000	P	S 0 1	
4 2 9	U 2 1 9	4,000	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area L (Continued)					
430	U 24 9	4,000	P	S 0 1	
431	U 27 1	4,000	P	S 0 1	
432	U 27 8	4,000	P	S 0 1	
433	U 27 9	4,000	P	S 0 1	
434	U 28 0	4,000	P	S 0 1	
435	U 32 8	4,000	P	S 0 1	
436	U 35 3	4,000	P	S 0 1	
437	U 35 9	4,000	P	S 0 1	
438	U 36 4	4,000	P	S 0 1	
439	U 36 7	4,000	P	S 0 1	
440	U 37 2	4,000	P	S 0 1	
441	U 37 3	4,000	P	S 0 1	
442	U 38 7	4,000	P	S 0 1	
443	U 38 9	4,000	P	S 0 1	
444	U 39 4	4,000	P	S 0 1	
445	U 39 5	4,000	P	S 0 1	
446	U 40 4	4,000	P	S 0 1	
447	U 40 9	4,000	P	S 0 1	
448	U 41 0	4,000	P	S 0 1	
449	U 41 1	4,000	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Material Disposal Area L (Impoundments B and D/Shafts 1, 13-17, and 19-34)[a,b]																	
	1	D	0	0	1	82,000	P	D	8	0							
	2	D	0	0	2	17,200	P	D	8	0							
	3	D	0	0	3	750	P	D	8	0							
	4	D	0	0	4	1,700	P	D	8	0							
	5	D	0	0	6	650	P	D	8	0							
	6	D	0	0	7	1,000	P	D	8	0							
	7	D	0	0	8	1,250	P	D	8	0							
	8	D	0	0	9	2,200	P	D	8	0							
	9	D	0	1	1	100	P	D	8	0							
1	0	D	0	1	6	600	P	D	8	0							
1	1	F	0	0	2	1,400	P	D	8	0							
1	2	P	0	1	5	4,000	P	D	8	0							
1	3	P	0	8	7	15	P	D	8	0							
1	4	U	0	0	2	5,000	P	D	8	0							
1	5	U	0	1	9	200	P	D	8	0							
1	6	U	0	6	9	500	P	D	8	0							
1	7	U	0	8	0	2,000	P	D	8	0							
1	8	U	1	2	2	550	P	D	8	0							
1	9	U	1	5	1	35	P	D	8	0							
2	0	U	1	5	4	550	P	D	8	0							
2	1	U	1	5	9	300	P	D	8	0							
2	2	U	1	6	1	500	P	D	8	0							
2	3	U	1	6	5	140	P	D	8	0							
2	4	U	2	2	0	620	P	D	8	0							
2	5	U	2	2	6	10,000	P	D	8	0							
2	6	U	2	2	8	4,400	P	D	8	0							
2	7	U	2	3	9	345	P	D	8	0							
2	8																
2	9																
3	0																
3	1																
3	2																
3	3																
3	4																
3	5																
3	6																
3	7																
3	8																
3	9																

[a] Based on historical data from waste operations personnel.

[b] To be closed in accordance with Code of Federal Regulations (CFR), Title 40, Part 265, Subpart G. Permitted status is not requested.

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)					B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area G																	
	1	D	0	0	1	330,000	P	S	0	1							
	2	D	0	0	2	395,000	P	S	0	1							
	3	D	0	0	3	185,000	P	S	0	1							
	4	D	0	0	4	2,525,000	P	S	0	1							
	5	D	0	0	5	82,000	P	S	0	1							
	6	D	0	0	6	515,000	P	S	0	1							
	7	D	0	0	7	3,775,000	P	S	0	1							
	8	D	0	0	8	5,400,000	P	S	0	1							
	9	D	0	0	9	100,000	P	S	0	1							
1	0	D	0	1	0	45,000	P	S	0	1							
1	1	D	0	1	1	2,540,000	P	S	0	1							
1	2	D	0	1	2	18,000	P	S	0	1							
1	3	D	0	1	3	4,000	P	S	0	1							
1	4	D	0	1	4	4,000	P	S	0	1							
1	5	D	0	1	5	7,000	P	S	0	1							
1	6	D	0	1	6	4,000	P	S	0	1							
1	7	D	0	1	7	4,000	P	S	0	1							
1	8	D	0	1	8	30,000	P	S	0	1							
1	9	D	0	1	9	25,000	P	S	0	1							
2	0	D	0	2	0	30,000	P	S	0	1							
2	1	D	0	2	1	15,000	P	S	0	1							
2	2	D	0	2	2	33,000	P	S	0	1							
2	3	D	0	2	3	4,000	P	S	0	1							
2	4	D	0	2	4	4,000	P	S	0	1							
2	5	D	0	2	5	4,000	P	S	0	1							
2	6	D	0	2	6	4,000	P	S	0	1							
2	7	D	0	2	7	22,000	P	S	0	1							
2	8	D	0	2	8	40,000	P	S	0	1							
2	9	D	0	2	9	7,000	P	S	0	1							
3	0	D	0	3	0	30,000	P	S	0	1							
3	1	D	0	3	1	22,000	P	S	0	1							
3	2	D	0	3	2	29,000	P	S	0	1							
3	3	D	0	3	3	29,000	P	S	0	1							
3	4	D	0	3	4	29,000	P	S	0	1							
3	5	D	0	3	5	30,000	P	S	0	1							
3	6	D	0	3	6	19,000	P	S	0	1							
3	7	D	0	3	7	7,000	P	S	0	1							
3	8	D	0	3	8	14,000	P	S	0	1							
3	9	D	0	3	9	20,000	P	S	0	1							

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area G (Continued)																	
4	0	D	0	4	0	25,000	P	S	0	1							
4	1	D	0	4	1	17,000	P	S	0	1							
4	2	D	0	4	2	22,000	P	S	0	1							
4	3	D	0	4	3	25,000	P	S	0	1							
4	4	F	0	0	1	6,410,000	P	S	0	1							
4	5	F	0	0	2	3,450,000	P	S	0	1							
4	6	F	0	0	3	2,850,000	P	S	0	1							
4	7	F	0	0	4	35,000	P	S	0	1							
4	8	F	0	0	5	3,250,000	P	S	0	1							
4	9	F	0	0	6	7,000	P	S	0	1							
5	0	F	0	0	7	18,000	P	S	0	1							
5	1	F	0	0	8	7,000	P	S	0	1							
5	2	F	0	0	9	8,000	P	S	0	1							
5	3	F	0	1	0	4,000	P	S	0	1							
5	4	F	0	1	1	4,000	P	S	0	1							
5	5	F	0	1	2	4,000	P	S	0	1							
5	6	F	0	1	9	4,000	P	S	0	1							
5	7	F	0	2	0	4,000	P	S	0	1							
5	8	F	0	2	1	4,000	P	S	0	1							
5	9	F	0	2	2	4,000	P	S	0	1							
6	0	F	0	2	3	4,000	P	S	0	1							
6	1	F	0	2	4	4,000	P	S	0	1							
6	2	F	0	2	5	4,000	P	S	0	1							
6	3	F	0	2	6	4,000	P	S	0	1							
6	4	F	0	2	7	4,000	P	S	0	1							
6	5	F	0	2	8	4,000	P	S	0	1							
6	6	F	0	3	2	4,000	P	S	0	1							
6	7	F	0	3	4	4,000	P	S	0	1							
6	8	F	0	3	5	4,000	P	S	0	1							
6	9	F	0	3	7	4,000	P	S	0	1							
7	0	F	0	3	8	4,000	P	S	0	1							
7	1	F	0	3	9	4,000	P	S	0	1							
7	2	K	0	4	4	22,000	P	S	0	1							
7	3	K	0	4	5	4,000	P	S	0	1							
7	4	K	0	4	6	4,000	P	S	0	1							
7	5	K	0	4	7	4,000	P	S	0	1							
7	6	K	0	8	4	500	P	S	0	1							
7	7	K	1	0	1	500	P	S	0	1							
7	8	K	1	0	2	500	P	S	0	1							

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)												D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area G (Continued)																
7	9 P 0 0 1	4000	P	S	0	1										
8	0 P 0 0 2	4000	P	S	0	1										
8	1 P 0 0 3	4100	P	S	0	1										
8	2 P 0 0 4	4000	P	S	0	1										
8	3 P 0 0 5	4000	P	S	0	1										
8	4 P 0 0 6	4000	P	S	0	1										
8	5 P 0 0 7	4000	P	S	0	1										
8	6 P 0 0 8	4000	P	S	0	1										
8	7 P 0 0 9	4000	P	S	0	1										
8	8 P 0 1 0	4000	P	S	0	1										
8	9 P 0 1 1	4000	P	S	0	1										
9	0 P 0 1 2	4100	P	S	0	1										
9	1 P 0 1 3	4000	P	S	0	1										
9	2 P 0 1 4	4000	P	S	0	1										
9	3 P 0 1 5	4100	P	S	0	1										
9	4 P 0 1 6	4000	P	S	0	1										
9	5 P 0 1 7	4000	P	S	0	1										
9	6 P 0 1 8	4000	P	S	0	1										
9	7 P 0 2 0	4000	P	S	0	1										
9	8 P 0 2 1	4000	P	S	0	1										
9	9 P 0 2 2	4000	P	S	0	1										
1 0	0 P 0 2 3	4000	P	S	0	1										
1 0	1 P 0 2 4	4000	P	S	0	1										
1 0	2 P 0 2 6	4000	P	S	0	1										
1 0	3 P 0 2 7	4000	P	S	0	1										
1 0	4 P 0 2 8	4000	P	S	0	1										
1 0	5 P 0 2 9	4100	P	S	0	1										
1 0	6 P 0 3 0	4100	P	S	0	1										
1 0	7 P 0 3 1	4100	P	S	0	1										
1 0	8 P 0 3 3	4000	P	S	0	1										
1 0	9 P 0 3 4	4000	P	S	0	1										
1 1	0 P 0 3 6	4000	P	S	0	1										
1 1	1 P 0 3 7	4000	P	S	0	1										
1 1	2 P 0 3 8	4100	P	S	0	1										
1 1	3 P 0 3 9	4000	P	S	0	1										
1 1	4 P 0 4 0	4000	P	S	0	1										
1 1	5 P 0 4 1	4000	P	S	0	1										
1 1	6 P 0 4 2	4000	P	S	0	1										
1 1	7 P 0 4 3	4000	P	S	0	1										

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area G (Continued)					
1 1 8	P 0 4 4	4000	P	S 0 1	
1 1 9	P 0 4 5	4000	P	S 0 1	
1 2 0	P 0 4 6	4000	P	S 0 1	
1 2 1	P 0 4 7	4000	P	S 0 1	
1 2 2	P 0 4 8	4000	P	S 0 1	
1 2 3	P 0 4 9	4000	P	S 0 1	
1 2 4	P 0 5 0	4000	P	S 0 1	
1 2 5	P 0 5 1	4000	P	S 0 1	
1 2 6	P 0 5 4	4000	P	S 0 1	
1 2 7	P 0 5 6	4100	P	S 0 1	
1 2 8	P 0 5 7	4000	P	S 0 1	
1 2 9	P 0 5 8	4000	P	S 0 1	
1 3 0	P 0 5 9	4000	P	S 0 1	
1 3 1	P 0 6 0	4000	P	S 0 1	
1 3 2	P 0 6 2	4000	P	S 0 1	
1 3 3	P 0 6 3	4100	P	S 0 1	
1 3 4	P 0 6 4	4000	P	S 0 1	
1 3 5	P 0 6 5	4000	P	S 0 1	
1 3 6	P 0 6 6	4000	P	S 0 1	
1 3 7	P 0 6 7	4000	P	S 0 1	
1 3 8	P 0 6 8	4100	P	S 0 1	
1 3 9	P 0 6 9	4000	P	S 0 1	
1 4 0	P 0 7 0	4000	P	S 0 1	
1 4 1	P 0 7 1	4000	P	S 0 1	
1 4 2	P 0 7 2	4000	P	S 0 1	
1 4 3	P 0 7 3	4100	P	S 0 1	
1 4 4	P 0 7 4	4000	P	S 0 1	
1 4 5	P 0 7 5	4000	P	S 0 1	
1 4 6	P 0 7 6	4000	P	S 0 1	
1 4 7	P 0 7 7	4000	P	S 0 1	
1 4 8	P 0 7 8	4000	P	S 0 1	
1 4 9	P 0 8 1	4000	P	S 0 1	
1 5 0	P 0 8 2	4000	P	S 0 1	
1 5 1	P 0 8 4	4000	P	S 0 1	
1 5 2	P 0 8 5	4000	P	S 0 1	
1 5 3	P 0 8 7	4000	P	S 0 1	
1 5 4	P 0 8 8	4000	P	S 0 1	
1 5 5	P 0 8 9	4000	P	S 0 1	
1 5 6	P 0 9 2	4000	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)										D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area G (Continued)														
1 5 7	P 0 9 3	4,000	P	S	0	1								
1 5 8	P 0 9 4	4,000	P	S	0	1								
1 5 9	P 0 9 5	4,100	P	S	0	1								
1 6 0	P 0 9 6	4,100	P	S	0	1								
1 6 1	P 0 9 7	4,000	P	S	0	1								
1 6 2	P 0 9 8	4,100	P	S	0	1								
1 6 3	P 0 9 9	4,000	P	S	0	1								
1 6 4	P 1 0 1	4,000	P	S	0	1								
1 6 5	P 1 0 2	4,000	P	S	0	1								
1 6 6	P 1 0 3	4,000	P	S	0	1								
1 6 7	P 1 0 4	4,000	P	S	0	1								
1 6 8	P 1 0 5	4,000	P	S	0	1								
1 6 9	P 1 0 6	4,100	P	S	0	1								
1 7 0	P 1 0 8	4,000	P	S	0	1								
1 7 1	P 1 0 9	4,000	P	S	0	1								
1 7 2	P 1 1 0	4,000	P	S	0	1								
1 7 3	P 1 1 1	4,000	P	S	0	1								
1 7 4	P 1 1 2	4,000	P	S	0	1								
1 7 5	P 1 1 3	4,000	P	S	0	1								
1 7 6	P 1 1 4	4,000	P	S	0	1								
1 7 7	P 1 1 5	4,000	P	S	0	1								
1 7 8	P 1 1 6	4,000	P	S	0	1								
1 7 9	P 1 1 8	4,000	P	S	0	1								
1 8 0	P 1 1 9	4,000	P	S	0	1								
1 8 1	P 1 2 0	4,100	P	S	0	1								
1 8 2	P 1 2 1	4,000	P	S	0	1								
1 8 3	P 1 2 2	4,000	P	S	0	1								
1 8 4	P 1 2 3	4,000	P	S	0	1								
1 8 5	P 1 2 7	4,000	P	S	0	1								
1 8 6	P 1 2 8	4,000	P	S	0	1								
1 8 7	P 1 8 5	4,000	P	S	0	1								
1 8 8	P 1 8 8	4,000	P	S	0	1								
1 8 9	P 1 8 9	4,000	P	S	0	1								
1 9 0	P 1 9 0	4,000	P	S	0	1								
1 9 1	P 1 9 1	4,000	P	S	0	1								
1 9 2	P 1 9 2	4,000	P	S	0	1								
1 9 3	P 1 9 4	4,000	P	S	0	1								
1 9 4	P 1 9 6	4,000	P	S	0	1								
1 9 5	P 1 9 7	4,000	P	S	0	1								

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area G (Continued)					
1 9 6	P 1 9 8	4,000	P	S 0 1	
1 9 7	P 1 9 9	4,000	P	S 0 1	
1 9 8	P 2 0 1	4,000	P	S 0 1	
1 9 9	P 2 0 2	4,000	P	S 0 1	
2 0 0	P 2 0 3	4,000	P	S 0 1	
2 0 1	P 2 0 4	4,000	P	S 0 1	
2 0 2	P 2 0 5	4,000	P	S 0 1	
2 0 3	U 0 0 1	4,100	P	S 0 1	
2 0 4	U 0 0 2	7,100	P	S 0 1	
2 0 5	U 0 0 3	4,100	P	S 0 1	
2 0 6	U 0 0 4	4,000	P	S 0 1	
2 0 7	U 0 0 5	4,000	P	S 0 1	
2 0 8	U 0 0 6	4,000	P	S 0 1	
2 0 9	U 0 0 7	4,000	P	S 0 1	
2 1 0	U 0 0 8	4,000	P	S 0 1	
2 1 1	U 0 0 9	4,000	P	S 0 1	
2 1 2	U 0 1 0	4,000	P	S 0 1	
2 1 3	U 0 1 1	4,000	P	S 0 1	
2 1 4	U 0 1 2	4,100	P	S 0 1	
2 1 5	U 0 1 4	4,000	P	S 0 1	
2 1 6	U 0 1 5	4,000	P	S 0 1	
2 1 7	U 0 1 6	4,000	P	S 0 1	
2 1 8	U 0 1 7	4,000	P	S 0 1	
2 1 9	U 0 1 8	4,000	P	S 0 1	
2 2 0	U 0 1 9	4,100	P	S 0 1	
2 2 1	U 0 2 0	4,000	P	S 0 1	
2 2 2	U 0 2 1	4,000	P	S 0 1	
2 2 3	U 0 2 2	4,100	P	S 0 1	
2 2 4	U 0 2 3	4,000	P	S 0 1	
2 2 5	U 0 2 4	4,000	P	S 0 1	
2 2 6	U 0 2 5	4,000	P	S 0 1	
2 2 7	U 0 2 6	4,000	P	S 0 1	
2 2 8	U 0 2 7	4,000	P	S 0 1	
2 2 9	U 0 2 8	4,000	P	S 0 1	
2 3 0	U 0 2 9	4,100	P	S 0 1	
2 3 1	U 0 3 0	4,000	P	S 0 1	
2 3 2	U 0 3 1	4,100	P	S 0 1	
2 3 3	U 0 3 2	4,000	P	S 0 1	
2 3 4	U 0 3 3	4,000	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area G (Continued)					
235	U035	4,000	P	S01	
236	U035	4,000	P	S01	
237	U036	4,000	P	S01	
238	U037	4,100	P	S01	
239	U038	4,000	P	S01	
240	U039	4,000	P	S01	
241	U041	4,000	P	S01	
242	U042	4,000	P	S01	
243	U043	4,000	P	S01	
244	U044	4,100	P	S01	
245	U045	4,100	P	S01	
246	U046	4,000	P	S01	
247	U047	4,000	P	S01	
248	U048	4,000	P	S01	
249	U049	4,000	P	S01	
250	U050	4,000	P	S01	
251	U051	4,000	P	S01	
252	U052	4,100	P	S01	
253	U053	4,000	P	S01	
254	U054	4,000	P	S01	
255	U055	4,100	P	S01	
256	U056	4,100	P	S01	
257	U057	4,000	P	S01	
258	U058	4,000	P	S01	
259	U059	4,000	P	S01	
260	U060	4,000	P	S01	
261	U061	4,000	P	S01	
262	U062	4,000	P	S01	
263	U063	4,000	P	S01	
264	U064	4,000	P	S01	
265	U065	4,000	P	S01	
266	U066	4,000	P	S01	
267	U067	4,000	P	S01	
268	U068	4,000	P	S01	
269	U069	4,000	P	S01	
270	U070	4,000	P	S01	
271	U071	4,000	P	S01	
272	U072	4,000	P	S01	
273	U073	4,100	P	S01	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area G (Continued)					
274	U067	4,000	P	S01	
275	U077	4,100	P	S01	
276	U078	4,000	P	S01	
277	U079	4,000	P	S01	
278	U080	12,000	P	S01	
279	U081	4,000	P	S01	
280	U082	4,000	P	S01	
281	U083	4,000	P	S01	
282	U084	4,000	P	S01	
283	U085	4,000	P	S01	
284	U086	4,000	P	S01	
285	U087	4,000	P	S01	
286	U088	4,000	P	S01	
287	U089	4,000	P	S01	
288	U090	4,000	P	S01	
289	U091	4,000	P	S01	
290	U092	4,000	P	S01	
291	U093	4,000	P	S01	
292	U094	4,000	P	S01	
293	U095	4,000	P	S01	
294	U096	4,000	P	S01	
295	U097	4,000	P	S01	
296	U098	4,000	P	S01	
297	U099	4,000	P	S01	
298	U100	4,000	P	S01	
299	U101	4,000	P	S01	
300	U102	4,000	P	S01	
301	U103	4,000	P	S01	
302	U104	4,000	P	S01	
303	U105	4,000	P	S01	
304	U106	4,000	P	S01	
305	U107	4,000	P	S01	
306	U108	4,000	P	S01	
307	U109	4,000	P	S01	
308	U110	4,000	P	S01	
309	U111	4,000	P	S01	
310	U112	4,000	P	S01	
311	U113	4,000	P	S01	
312	U114	4,000	P	S01	
313	U115	4,000	P	S01	
314	U116	4,000	P	S01	
315	U117	4,000	P	S01	
316	U118	4,000	P	S01	
317	U119	4,000	P	S01	
318	U120	4,100	P	S01	
319	U121	4,000	P	S01	
320	U122	4,000	P	S01	
321	U123	4,000	P	S01	
322	U124	4,100	P	S01	
323	U125	4,000	P	S01	
324	U126	4,000	P	S01	
325	U127	4,100	P	S01	
326	U128	4,000	P	S01	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area G (Continued)					
3 1 3	U 1 1 7	4,100	P	S 0 1	
3 1 4	U 1 1 8	4,000	P	S 0 1	
3 1 5	U 1 1 9	4,000	P	S 0 1	
3 1 6	U 1 2 0	4,000	P	S 0 1	
3 1 7	U 1 2 1	4,100	P	S 0 1	
3 1 8	U 1 2 2	7,100	P	S 0 1	
3 1 9	U 1 2 3	4,100	P	S 0 1	
3 2 0	U 1 2 4	4,000	P	S 0 1	
3 2 1	U 1 2 5	4,000	P	S 0 1	
3 2 2	U 1 2 6	4,000	P	S 0 1	
3 2 3	U 1 2 7	4,000	P	S 0 1	
3 2 4	U 1 2 8	4,000	P	S 0 1	
3 2 5	U 1 2 9	4,000	P	S 0 1	
3 2 6	U 1 3 0	4,000	P	S 0 1	
3 2 7	U 1 3 1	4,100	P	S 0 1	
3 2 8	U 1 3 2	4,000	P	S 0 1	
3 2 9	U 1 3 3	4,100	P	S 0 1	
3 3 0	U 1 3 4	12,100	P	S 0 1	
3 3 1	U 1 3 5	4,100	P	S 0 1	
3 3 2	U 1 3 6	4,000	P	S 0 1	
3 3 3	U 1 3 7	4,000	P	S 0 1	
3 3 4	U 1 3 8	4,000	P	S 0 1	
3 3 5	U 1 4 0	4,100	P	S 0 1	
3 3 6	U 1 4 1	4,000	P	S 0 1	
3 3 7	U 1 4 2	4,000	P	S 0 1	
3 3 8	U 1 4 3	4,000	P	S 0 1	
3 3 9	U 1 4 4	4,100	P	S 0 1	
3 4 0	U 1 4 5	4,000	P	S 0 1	
3 4 1	U 1 4 6	4,000	P	S 0 1	
3 4 2	U 1 4 7	4,000	P	S 0 1	
3 4 3	U 1 4 8	4,000	P	S 0 1	
3 4 4	U 1 4 9	4,000	P	S 0 1	
3 4 5	U 1 5 0	4,000	P	S 0 1	
3 4 6	U 1 5 1	7,100	P	S 0 1	
3 4 7	U 1 5 2	4,000	P	S 0 1	
3 4 8	U 1 5 3	4,000	P	S 0 1	
3 4 9	U 1 5 4	4,100	P	S 0 1	
3 5 0	U 1 5 5	4,000	P	S 0 1	
3 5 1	U 1 5 6	4,000	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area G (Continued)					
3 5 2	U 1 5 7	4,000	P	S 0 1	
3 5 3	U 1 5 8	4,000	P	S 0 1	
3 5 4	U 1 5 9	4,100	P	S 0 1	
3 5 5	U 1 6 0	4,100	P	S 0 1	
3 5 6	U 1 6 1	4,100	P	S 0 1	
3 5 7	U 1 6 2	4,000	P	S 0 1	
3 5 8	U 1 6 3	4,000	P	S 0 1	
3 5 9	U 1 6 4	4,000	P	S 0 1	
3 6 0	U 1 6 5	4,100	P	S 0 1	
3 6 1	U 1 6 6	4,000	P	S 0 1	
3 6 2	U 1 6 7	4,000	P	S 0 1	
3 6 3	U 1 6 8	4,000	P	S 0 1	
3 6 4	U 1 6 9	4,100	P	S 0 1	
3 6 5	U 1 7 0	4,000	P	S 0 1	
3 6 6	U 1 7 1	4,000	P	S 0 1	
3 6 7	U 1 7 2	4,000	P	S 0 1	
3 6 8	U 1 7 3	4,000	P	S 0 1	
3 6 9	U 1 7 4	4,000	P	S 0 1	
3 7 0	U 1 7 6	4,000	P	S 0 1	
3 7 1	U 1 7 7	4,000	P	S 0 1	
3 7 2	U 1 7 8	4,000	P	S 0 1	
3 7 3	U 1 7 9	4,000	P	S 0 1	
3 7 4	U 1 8 0	4,000	P	S 0 1	
3 7 5	U 1 8 1	4,000	P	S 0 1	
3 7 6	U 1 8 2	4,000	P	S 0 1	
3 7 7	U 1 8 3	4,000	P	S 0 1	
3 7 8	U 1 8 4	4,000	P	S 0 1	
3 7 9	U 1 8 5	4,000	P	S 0 1	
3 8 0	U 1 8 6	4,000	P	S 0 1	
3 8 1	U 1 8 7	4,000	P	S 0 1	
3 8 2	U 1 8 8	4,100	P	S 0 1	
3 8 3	U 1 8 9	4,000	P	S 0 1	
3 8 4	U 1 9 0	4,100	P	S 0 1	
3 8 5	U 1 9 1	4,000	P	S 0 1	
3 8 6	U 1 9 2	4,000	P	S 0 1	
3 8 7	U 1 9 3	4,000	P	S 0 1	
3 8 8	U 1 9 4	4,000	P	S 0 1	
3 8 9	U 1 9 6	4,100	P	S 0 1	
3 9 0	U 1 9 7	4,000	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area G (Continued)					
3 9 1	U 2 0 0	4,000	P	S 0 1	
3 9 2	U 2 0 1	4,000	P	S 0 1	
3 9 3	U 2 0 2	4,000	P	S 0 1	
3 9 4	U 2 0 3	4,000	P	S 0 1	
3 9 5	U 2 0 4	4,100	P	S 0 1	
3 9 6	U 2 0 5	4,000	P	S 0 1	
3 9 7	U 2 0 6	4,000	P	S 0 1	
3 9 8	U 2 0 7	4,000	P	S 0 1	
3 9 9	U 2 0 8	4,000	P	S 0 1	
4 0 0	U 2 0 9	4,000	P	S 0 1	
4 0 1	U 2 1 0	4,100	P	S 0 1	
4 0 2	U 2 1 1	4,100	P	S 0 1	
4 0 3	U 2 1 3	4,100	P	S 0 1	
4 0 4	U 2 1 4	4,000	P	S 0 1	
4 0 5	U 2 1 5	4,000	P	S 0 1	
4 0 6	U 2 1 6	4,100	P	S 0 1	
4 0 7	U 2 1 7	4,000	P	S 0 1	
4 0 8	U 2 1 8	4,100	P	S 0 1	
4 0 9	U 2 1 9	4,100	P	S 0 1	
4 1 0	U 2 2 0	7,100	P	S 0 1	
4 1 1	U 2 2 1	4,000	P	S 0 1	
4 1 2	U 2 2 2	4,000	P	S 0 1	
4 1 3	U 2 2 3	4,000	P	S 0 1	
4 1 4	U 2 2 5	4,100	P	S 0 1	
4 1 5	U 2 2 6	7,100	P	S 0 1	
4 1 6	U 2 2 7	4,100	P	S 0 1	
4 1 7	U 2 2 8	7,100	P	S 0 1	
4 1 8	U 2 3 4	4,000	P	S 0 1	
4 1 9	U 2 3 5	4,000	P	S 0 1	
4 2 0	U 2 3 6	4,000	P	S 0 1	
4 2 1	U 2 3 7	4,000	P	S 0 1	
4 2 2	U 2 3 8	4,000	P	S 0 1	
4 2 3	U 2 3 9	7,100	P	S 0 1	
4 2 4	U 2 4 0	4,000	P	S 0 1	
4 2 5	U 2 4 3	4,000	P	S 0 1	
4 2 6	U 2 4 4	4,000	P	S 0 1	
4 2 7	U 2 4 6	4,100	P	S 0 1	
4 2 8	U 2 4 7	4,000	P	S 0 1	
4 2 9	U 2 4 8	4,000	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Area G (Continued)					
430	U 024 9	4,000	P	S 01	
431	U 027 1	4,000	P	S 01	
432	U 027 8	4,000	P	S 01	
433	U 027 9	4,000	P	S 01	
434	U 028 0	4,000	P	S 01	
435	U 032 8	4,000	P	S 01	
436	U 035 3	4,000	P	S 01	
437	U 035 9	4,000	P	S 01	
438	U 036 4	4,000	P	S 01	
439	U 036 7	4,000	P	S 01	
440	U 037 2	4,000	P	S 01	
441	U 037 3	4,000	P	S 01	
442	U 038 7	4,000	P	S 01	
443	U 038 9	4,000	P	S 01	
444	U 039 4	4,000	P	S 01	
445	U 039 5	4,000	P	S 01	
446	U 040 4	4,000	P	S 01	
447	U 040 9	4,000	P	S 01	
448	U 041 0	4,000	P	S 01	
449	U 041 1	4,000	P	S 01	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Material Disposal Area G (Shaft 124 and Pit 29) [a, b]																	
	1	D	0	0	4	850	P	D	8	0							
	2	D	0	0	5	2,100	P	D	8	0							
	3	D	0	0	6	4,250	P	D	8	0							
	4	D	0	0	7	4,450	P	D	8	0							
	5	D	0	0	8	507,100	P	D	8	0							
	6	D	0	0	9	850	P	D	8	0							
	7	D	0	1	0	15	P	D	8	0							
	8	D	0	1	1	530	P	D	8	0							
	9																
1	0																
1	1																
1	2																
1	3																
1	4																
1	5																
1	6																
1	7																
1	8																
1	9																
2	0																
2	1																
2	2																
2	3																
2	4																
2	5																
2	6																
2	7																
2	8																
2	9																
3	0																
3	1																
3	2																
3	3																
3	4																
3	5																
3	6																
3	7																
3	8																
3	9																

[a] Based on total estimated hazardous waste chemical inventory from the TA-54 RFI Report, Los Alamos National Laboratory, Los Alamos, New Mexico, March 2000.

[b] To be closed in accordance with Code of Federal Regulations (CFR), Title 40, Part 265, Subpart G. Permitted status is not requested.

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)					B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, West																	
	1	D	0	0	1	74,252	P	S	0	1							
	2	D	0	0	2	38,448	P	S	0	1							
	3	D	0	0	3	3,528	P	S	0	1							
	4	D	0	0	4	24,692	P	S	0	1							
	5	D	0	0	5	22,576	P	S	0	1							
	6	D	0	0	6	3,627,220	P	S	0	1							
	7	D	0	0	7	3,784,544	P	S	0	1							
	8	D	0	0	8	8,589,208	P	S	0	1							
	9	D	0	0	9	261,732	P	S	0	1							
1	0	D	0	1	0	27,160	P	S	0	1							
1	1	D	0	1	1	30,336	P	S	0	1							
1	2	D	0	1	2	36,000	P	S	0	1							
1	3	D	0	1	3	8,000	P	S	0	1							
1	4	D	0	1	4	8,000	P	S	0	1							
1	5	D	0	1	5	14,000	P	S	0	1							
1	6	D	0	1	6	8,000	P	S	0	1							
1	7	D	0	1	7	8,000	P	S	0	1							
1	8	D	0	1	8	1,412	P	S	0	1							
1	9	D	0	1	9	28,220	P	S	0	1							
2	0	D	0	2	0	60,000	P	S	0	1							
2	1	D	0	2	1	4,880	P	S	0	1							
2	2	D	0	2	2	6,704	P	S	0	1							
2	3	D	0	2	3	8,000	P	S	0	1							
2	4	D	0	2	4	8,000	P	S	0	1							
2	5	D	0	2	5	8,000	P	S	0	1							
2	6	D	0	2	6	8,000	P	S	0	1							
2	7	D	0	2	7	4,056	P	S	0	1							
2	8	D	0	2	8	1,158,400	P	S	0	1							
2	9	D	0	2	9	1,152,576	P	S	0	1							
3	0	D	0	3	0	26,100	P	S	0	1							
3	1	D	0	3	1	352	P	S	0	1							
3	2	D	0	3	2	16,580	P	S	0	1							
3	3	D	0	3	3	11,112	P	S	0	1							
3	4	D	0	3	4	5,820	P	S	0	1							
3	5	D	0	3	5	528	P	S	0	1							
3	6	D	0	3	6	1,764	P	S	0	1							
3	7	D	0	3	7	2,820	P	S	0	1							
3	8	D	0	3	8	352	P	S	0	1							
3	9	D	0	3	9	7,760	P	S	0	1							

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, West (Continued)																	
4	0	D	0	4	0	17,460	P	S	0	1							
4	1	D	0	4	1	352	P	S	0	1							
4	2	D	0	4	2	5,644	P	S	0	1							
4	3	D	0	4	3	2,116	P	S	0	1							
4	4	F	0	0	1	2,225,608	P	S	0	1							
4	5	F	0	0	2	288,012	P	S	0	1							
4	6	F	0	0	3	137,856	P	S	0	1							
4	7	F	0	0	4	8,640	P	S	0	1							
4	8	F	0	0	5	1,296,844	P	S	0	1							
4	9	F	0	0	6	14,000	P	S	0	1							
5	0	F	0	0	7	36,000	P	S	0	1							
5	1	F	0	0	8	14000	P	S	0	1							
5	2	F	0	0	9	8,000	P	S	0	1							
5	3	F	0	1	0	8,000	P	S	0	1							
5	4	F	0	1	1	8,000	P	S	0	1							
5	5	F	0	1	2	8,000	P	S	0	1							
5	6	F	0	1	9	8,000	P	S	0	1							
5	7	F	0	2	0	8,000	P	S	0	1							
5	8	F	0	2	1	8,000	P	S	0	1							
5	9	F	0	2	2	8,000	P	S	0	1							
6	0	F	0	2	3	8,000	P	S	0	1							
6	1	F	0	2	4	8,000	P	S	0	1							
6	2	F	0	2	5	8,000	P	S	0	1							
6	3	F	0	2	6	8,000	P	S	0	1							
6	4	F	0	2	7	8,000	P	S	0	1							
6	5	F	0	2	8	8,000	P	S	0	1							
6	6	F	0	3	2	8,000	P	S	0	1							
6	7	F	0	3	4	8,000	P	S	0	1							
6	8	F	0	3	5	8,000	P	S	0	1							
6	9	F	0	3	7	8,000	P	S	0	1							
7	0	F	0	3	8	8,000	P	S	0	1							
7	1	F	0	3	9	8,000	P	S	0	1							
7	2	K	0	4	4	4,000	P	S	0	1							
7	3	K	0	4	5	8,000	P	S	0	1							
7	4	K	0	4	6	8,000	P	S	0	1							
7	5	K	0	4	7	8,000	P	S	0	1							
7	6	K	0	8	4	1,000	P	S	0	1							
7	7	K	1	0	1	1,000	P	S	0	1							
7	8	K	1	0	2	1,000	P	S	0	1							

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, West (Continued)					
	7 9 P 0 0 1	176	P	S 0 1	
	8 0 P 0 0 2	176	P	S 0 1	
	8 1 P 0 0 3	176	P	S 0 1	
	8 2 P 0 0 4	176	P	S 0 1	
	8 3 P 0 0 5	176	P	S 0 1	
	8 4 P 0 0 6	176	P	S 0 1	
	8 5 P 0 0 7	176	P	S 0 1	
	8 6 P 0 0 8	176	P	S 0 1	
	8 7 P 0 0 9	176	P	S 0 1	
	8 8 P 0 1 0	176	P	S 0 1	
	8 9 P 0 1 1	176	P	S 0 1	
	9 0 P 0 1 2	176	P	S 0 1	
	9 1 P 0 1 3	176	P	S 0 1	
	9 2 P 0 1 4	176	P	S 0 1	
	9 3 P 0 1 5	176	P	S 0 1	
	9 4 P 0 1 6	176	P	S 0 1	
	9 5 P 0 1 7	176	P	S 0 1	
	9 6 P 0 1 8	176	P	S 0 1	
	9 7 P 0 2 0	176	P	S 0 1	
	9 8 P 0 2 1	176	P	S 0 1	
	9 9 P 0 2 2	176	P	S 0 1	
1	0 0 P 0 2 3	176	P	S 0 1	
1	0 1 P 0 2 4	176	P	S 0 1	
1	0 2 P 0 2 6	176	P	S 0 1	
1	0 3 P 0 2 7	176	P	S 0 1	
1	0 4 P 0 2 8	176	P	S 0 1	
1	0 5 P 0 2 9	176	P	S 0 1	
1	0 6 P 0 3 0	176	P	S 0 1	
1	0 7 P 0 3 1	176	P	S 0 1	
1	0 8 P 0 3 3	176	P	S 0 1	
1	0 9 P 0 3 4	176	P	S 0 1	
1	1 0 P 0 3 6	176	P	S 0 1	
1	1 1 P 0 3 7	176	P	S 0 1	
1	1 2 P 0 3 8	176	P	S 0 1	
1	1 3 P 0 3 9	176	P	S 0 1	
1	1 4 P 0 4 0	176	P	S 0 1	
1	1 5 P 0 4 1	176	P	S 0 1	
1	1 6 P 0 4 2	176	P	S 0 1	
1	1 7 P 0 4 3	176	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, West (Continued)					
1 1 8	P 0 4 4	176	P	S 0 1	
1 1 9	P 0 4 5	176	P	S 0 1	
1 2 0	P 0 4 6	176	P	S 0 1	
1 2 1	P 0 4 7	176	P	S 0 1	
1 2 2	P 0 4 8	176	P	S 0 1	
1 2 3	P 0 4 9	176	P	S 0 1	
1 2 4	P 0 5 0	176	P	S 0 1	
1 2 5	P 0 5 1	176	P	S 0 1	
1 2 6	P 0 5 4	176	P	S 0 1	
1 2 7	P 0 5 6	176	P	S 0 1	
1 2 8	P 0 5 7	176	P	S 0 1	
1 2 9	P 0 5 8	176	P	S 0 1	
1 3 0	P 0 5 9	176	P	S 0 1	
1 3 1	P 0 6 0	176	P	S 0 1	
1 3 2	P 0 6 2	176	P	S 0 1	
1 3 3	P 0 6 3	176	P	S 0 1	
1 3 4	P 0 6 4	176	P	S 0 1	
1 3 5	P 0 6 5	176	P	S 0 1	
1 3 6	P 0 6 6	176	P	S 0 1	
1 3 7	P 0 6 7	176	P	S 0 1	
1 3 8	P 0 6 8	176	P	S 0 1	
1 3 9	P 0 6 9	176	P	S 0 1	
1 4 0	P 0 7 0	176	P	S 0 1	
1 4 1	P 0 7 1	176	P	S 0 1	
1 4 2	P 0 7 2	176	P	S 0 1	
1 4 3	P 0 7 3	176	P	S 0 1	
1 4 4	P 0 7 4	176	P	S 0 1	
1 4 5	P 0 7 5	176	P	S 0 1	
1 4 6	P 0 7 6	176	P	S 0 1	
1 4 7	P 0 7 7	176	P	S 0 1	
1 4 8	P 0 7 8	176	P	S 0 1	
1 4 9	P 0 8 1	176	P	S 0 1	
1 5 0	P 0 8 2	176	P	S 0 1	
1 5 1	P 0 8 4	176	P	S 0 1	
1 5 2	P 0 8 5	176	P	S 0 1	
1 5 3	P 0 8 7	176	P	S 0 1	
1 5 4	P 0 8 8	176	P	S 0 1	
1 5 5	P 0 8 9	176	P	S 0 1	
1 5 6	P 0 9 2	176	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, West (Continued)					
157	P 09 3	176	P	S 01	
158	P 09 4	176	P	S 01	
159	P 09 5	176	P	S 01	
160	P 09 6	176	P	S 01	
161	P 09 7	176	P	S 01	
162	P 09 8	176	P	S 01	
163	P 09 9	176	P	S 01	
164	P 10 1	176	P	S 01	
165	P 10 2	176	P	S 01	
166	P 10 3	176	P	S 01	
167	P 10 4	176	P	S 01	
168	P 10 5	176	P	S 01	
169	P 10 6	176	P	S 01	
170	P 10 8	176	P	S 01	
171	P 10 9	176	P	S 01	
172	P 11 0	176	P	S 01	
173	P 11 1	176	P	S 01	
174	P 11 2	176	P	S 01	
175	P 11 3	176	P	S 01	
176	P 11 4	176	P	S 01	
177	P 11 5	176	P	S 01	
178	P 11 6	176	P	S 01	
179	P 11 7	176	P	S 01	
180	P 11 8	176	P	S 01	
181	P 11 9	176	P	S 01	
182	P 12 0	176	P	S 01	
183	P 12 1	176	P	S 01	
184	P 12 2	176	P	S 01	
185	P 12 3	176	P	S 01	
186	P 12 4	176	P	S 01	
187	P 12 5	176	P	S 01	
188	P 12 6	176	P	S 01	
189	P 12 7	176	P	S 01	
190	P 12 8	176	P	S 01	
191	P 12 9	176	P	S 01	
192	P 13 0	176	P	S 01	
193	P 13 1	176	P	S 01	
194	P 13 2	176	P	S 01	
195	P 13 3	176	P	S 01	
196	P 13 4	176	P	S 01	
197	P 13 5	176	P	S 01	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, West (Continued)					
1	9 6 P 1 9 8	176	P	S 0 1	
1	9 7 P 1 9 9	176	P	S 0 1	
1	9 8 P 2 0 1	176	P	S 0 1	
1	9 9 P 2 0 2	176	P	S 0 1	
2	0 0 P 2 0 3	176	P	S 0 1	
2	0 1 P 2 0 4	176	P	S 0 1	
2	0 2 P 2 0 5	176	P	S 0 1	
2	0 3 U 0 0 1	176	P	S 0 1	
2	0 4 U 0 0 2	176	P	S 0 1	
2	0 5 U 0 0 3	176	P	S 0 1	
2	0 6 U 0 0 4	176	P	S 0 1	
2	0 7 U 0 0 5	176	P	S 0 1	
2	0 8 U 0 0 6	176	P	S 0 1	
2	0 9 U 0 0 7	176	P	S 0 1	
2	1 0 U 0 0 8	176	P	S 0 1	
2	1 1 U 0 0 9	176	P	S 0 1	
2	1 2 U 0 1 0	176	P	S 0 1	
2	1 3 U 0 1 1	176	P	S 0 1	
2	1 4 U 0 1 2	176	P	S 0 1	
2	1 5 U 0 1 4	176	P	S 0 1	
2	1 6 U 0 1 5	176	P	S 0 1	
2	1 7 U 0 1 6	176	P	S 0 1	
2	1 8 U 0 1 7	176	P	S 0 1	
2	1 9 U 0 1 8	176	P	S 0 1	
2	2 0 U 0 1 9	176	P	S 0 1	
2	2 1 U 0 2 0	176	P	S 0 1	
2	2 2 U 0 2 1	176	P	S 0 1	
2	2 3 U 0 2 2	176	P	S 0 1	
2	2 4 U 0 2 3	176	P	S 0 1	
2	2 5 U 0 2 4	176	P	S 0 1	
2	2 6 U 0 2 5	176	P	S 0 1	
2	2 7 U 0 2 6	176	P	S 0 1	
2	2 8 U 0 2 7	176	P	S 0 1	
2	2 9 U 0 2 8	176	P	S 0 1	
2	3 0 U 0 2 9	176	P	S 0 1	
2	3 1 U 0 3 0	176	P	S 0 1	
2	3 2 U 0 3 1	176	P	S 0 1	
2	3 3 U 0 3 2	176	P	S 0 1	
2	3 4 U 0 3 3	176	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, West (Continued)					
235	U035	176	P	S01	
236	U035	176	P	S01	
237	U036	176	P	S01	
238	U037	176	P	S01	
239	U038	176	P	S01	
240	U039	176	P	S01	
241	U041	176	P	S01	
242	U042	176	P	S01	
243	U043	176	P	S01	
244	U044	176	P	S01	
245	U045	176	P	S01	
246	U046	176	P	S01	
247	U047	176	P	S01	
248	U048	176	P	S01	
249	U049	176	P	S01	
250	U050	176	P	S01	
251	U051	176	P	S01	
252	U052	176	P	S01	
253	U053	176	P	S01	
254	U054	176	P	S01	
255	U055	176	P	S01	
256	U056	176	P	S01	
257	U057	176	P	S01	
258	U058	176	P	S01	
259	U059	176	P	S01	
260	U060	176	P	S01	
261	U061	176	P	S01	
262	U062	176	P	S01	
263	U063	176	P	S01	
264	U064	176	P	S01	
265	U065	176	P	S01	
266	U066	176	P	S01	
267	U067	176	P	S01	
268	U068	176	P	S01	
269	U069	176	P	S01	
270	U070	176	P	S01	
271	U071	176	P	S01	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, West (Continued)					
274	U074	176	P	S01	
275	U077	176	P	S01	
276	U078	176	P	S01	
277	U079	176	P	S01	
280	U080	176	P	S01	
281	U081	176	P	S01	
282	U082	176	P	S01	
283	U083	176	P	S01	
284	U084	176	P	S01	
285	U085	176	P	S01	
286	U086	176	P	S01	
287	U087	176	P	S01	
288	U088	176	P	S01	
289	U089	176	P	S01	
290	U090	176	P	S01	
291	U091	176	P	S01	
292	U092	176	P	S01	
293	U093	176	P	S01	
294	U094	176	P	S01	
295	U095	176	P	S01	
296	U096	176	P	S01	
297	U097	176	P	S01	
298	U098	176	P	S01	
299	U099	176	P	S01	
300	U100	176	P	S01	
301	U101	176	P	S01	
302	U102	176	P	S01	
303	U103	176	P	S01	
304	U104	176	P	S01	
305	U105	176	P	S01	
306	U106	176	P	S01	
307	U107	176	P	S01	
308	U108	176	P	S01	
309	U109	176	P	S01	
310	U110	176	P	S01	
311	U111	176	P	S01	
312	U112	176	P	S01	
313	U113	176	P	S01	
314	U114	176	P	S01	
315	U115	176	P	S01	
316	U116	176	P	S01	
317	U117	176	P	S01	
318	U118	176	P	S01	
319	U119	176	P	S01	
320	U120	176	P	S01	
321	U121	176	P	S01	
322	U122	176	P	S01	
323	U123	176	P	S01	
324	U124	176	P	S01	
325	U125	176	P	S01	
326	U126	176	P	S01	
327	U127	176	P	S01	
328	U128	176	P	S01	
329	U129	176	P	S01	
330	U130	176	P	S01	
331	U131	176	P	S01	
332	U132	176	P	S01	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, West (Continued)					
3 1 3	U 1 1 7	176	P	S 0 1	
3 1 4	U 1 1 8	176	P	S 0 1	
3 1 5	U 1 1 9	176	P	S 0 1	
3 1 6	U 1 2 0	176	P	S 0 1	
3 1 7	U 1 2 1	176	P	S 0 1	
3 1 8	U 1 2 2	176	P	S 0 1	
3 1 9	U 1 2 3	176	P	S 0 1	
3 2 0	U 1 2 4	176	P	S 0 1	
3 2 1	U 1 2 5	176	P	S 0 1	
3 2 2	U 1 2 6	176	P	S 0 1	
3 2 3	U 1 2 7	176	P	S 0 1	
3 2 4	U 1 2 8	176	P	S 0 1	
3 2 5	U 1 2 9	176	P	S 0 1	
3 2 6	U 1 3 0	176	P	S 0 1	
3 2 7	U 1 3 1	176	P	S 0 1	
3 2 8	U 1 3 2	176	P	S 0 1	
3 2 9	U 1 3 3	176	P	S 0 1	
3 3 0	U 1 3 4	176	P	S 0 1	
3 3 1	U 1 3 5	176	P	S 0 1	
3 3 2	U 1 3 6	176	P	S 0 1	
3 3 3	U 1 3 7	176	P	S 0 1	
3 3 4	U 1 3 8	176	P	S 0 1	
3 3 5	U 1 4 0	176	P	S 0 1	
3 3 6	U 1 4 1	176	P	S 0 1	
3 3 7	U 1 4 2	176	P	S 0 1	
3 3 8	U 1 4 3	176	P	S 0 1	
3 3 9	U 1 4 4	176	P	S 0 1	
3 4 0	U 1 4 5	176	P	S 0 1	
3 4 1	U 1 4 6	176	P	S 0 1	
3 4 2	U 1 4 7	176	P	S 0 1	
3 4 3	U 1 4 8	176	P	S 0 1	
3 4 4	U 1 4 9	176	P	S 0 1	
3 4 5	U 1 5 0	176	P	S 0 1	
3 4 6	U 1 5 1	1,060	P	S 0 1	
3 4 7	U 1 5 2	176	P	S 0 1	
3 4 8	U 1 5 3	176	P	S 0 1	
3 4 9	U 1 5 4	176	P	S 0 1	
3 5 0	U 1 5 5	176	P	S 0 1	
3 5 1	U 1 5 6	176	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, West (Continued)					
356	U156	176	P	S01	
357	U158	176	P	S01	
358	U159	528	P	S01	
359	U160	176	P	S01	
360	U161	176	P	S01	
361	U162	176	P	S01	
362	U163	176	P	S01	
363	U164	176	P	S01	
364	U165	176	P	S01	
365	U166	176	P	S01	
366	U167	176	P	S01	
367	U168	176	P	S01	
368	U169	176	P	S01	
369	U170	176	P	S01	
370	U171	176	P	S01	
371	U172	176	P	S01	
372	U173	176	P	S01	
373	U174	176	P	S01	
374	U175	176	P	S01	
375	U176	176	P	S01	
376	U177	176	P	S01	
377	U178	176	P	S01	
378	U179	176	P	S01	
379	U180	176	P	S01	
380	U181	176	P	S01	
381	U182	176	P	S01	
382	U183	176	P	S01	
383	U184	176	P	S01	
384	U185	176	P	S01	
385	U186	176	P	S01	
386	U187	176	P	S01	
387	U188	176	P	S01	
388	U189	176	P	S01	
389	U190	176	P	S01	
390	U191	176	P	S01	
391	U192	176	P	S01	
392	U193	176	P	S01	
393	U194	176	P	S01	
394	U195	176	P	S01	
395	U196	176	P	S01	
396	U197	176	P	S01	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, West (Continued)					
3 9 1	U 2 0 0	176	P	S 0 1	
3 9 2	U 2 0 1	176	P	S 0 1	
3 9 3	U 2 0 2	176	P	S 0 1	
3 9 4	U 2 0 3	176	P	S 0 1	
3 9 5	U 2 0 4	176	P	S 0 1	
3 9 6	U 2 0 5	176	P	S 0 1	
3 9 7	U 2 0 6	176	P	S 0 1	
3 9 8	U 2 0 7	176	P	S 0 1	
3 9 9	U 2 0 8	176	P	S 0 1	
4 0 0	U 2 0 9	176	P	S 0 1	
4 0 1	U 2 1 0	176	P	S 0 1	
4 0 2	U 2 1 1	176	P	S 0 1	
4 0 3	U 2 1 3	176	P	S 0 1	
4 0 4	U 2 1 4	176	P	S 0 1	
4 0 5	U 2 1 5	176	P	S 0 1	
4 0 6	U 2 1 6	176	P	S 0 1	
4 0 7	U 2 1 7	176	P	S 0 1	
4 0 8	U 2 1 8	176	P	S 0 1	
4 0 9	U 2 1 9	176	P	S 0 1	
4 1 0	U 2 2 0	176	P	S 0 1	
4 1 1	U 2 2 1	176	P	S 0 1	
4 1 2	U 2 2 2	176	P	S 0 1	
4 1 3	U 2 2 3	176	P	S 0 1	
4 1 4	U 2 2 5	176	P	S 0 1	
4 1 5	U 2 2 6	4,584	P	S 0 1	
4 1 6	U 2 2 7	176	P	S 0 1	
4 1 7	U 2 2 8	176	P	S 0 1	
4 1 8	U 2 3 4	176	P	S 0 1	
4 1 9	U 2 3 5	176	P	S 0 1	
4 2 0	U 2 3 6	176	P	S 0 1	
4 2 1	U 2 3 7	176	P	S 0 1	
4 2 2	U 2 3 8	176	P	S 0 1	
4 2 3	U 2 3 9	352	P	S 0 1	
4 2 4	U 2 4 0	176	P	S 0 1	
4 2 5	U 2 4 3	176	P	S 0 1	
4 2 6	U 2 4 4	176	P	S 0 1	
4 2 7	U 2 4 6	176	P	S 0 1	
4 2 8	U 2 4 7	176	P	S 0 1	
4 2 9	U 2 4 8	176	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, West (Continued)					
430	U024	176	P	S01	
431	U027	176	P	S01	
432	U028	176	P	S01	
433	U029	176	P	S01	
434	U032	176	P	S01	
435	U038	176	P	S01	
436	U039	176	P	S01	
437	U041	176	P	S01	
438	U043	176	P	S01	
439	U044	176	P	S01	
440	U045	176	P	S01	
441	U046	176	P	S01	
442	U047	176	P	S01	
443	U048	176	P	S01	
444	U049	176	P	S01	
445	U050	176	P	S01	
446	U051	176	P	S01	
447	U052	176	P	S01	
448	U053	176	P	S01	
449	U055	176	P	S01	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number		A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
								(1) PROCESS CODES (Enter code)									(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 54, Material Disposal Area H (Shaft 9) [a]																	
	1	D	0	0	3	0	P	D	8	0							
	2																
	3																
	4																
	5																
	6																
	7																
	8																
	9																
1	0																
1	1																
1	2																
1	3																
1	4																
1	5																
1	6																
1	7																
1	8																
1	9																
2	0																
2	1																
2	2																
2	3																
2	4																
2	5																
2	6																
2	7																
2	8																
2	9																
3	0																
3	1																
3	2																
3	3																
3	4																
3	5																
3	6																
3	7																
3	8																
3	9																

[b] To be closed in accordance with Code of Federal Regulations (CFR), Title 40, Part 265, Subpart G. Permitted status is not requested.

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)										D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 55														
	1	D 0 0 1	75,000	P	S 0 1									
	2	D 0 0 2	150,000	P	S 0 1	S 0 2	T 0 4							
	3	D 0 0 3	42,000	P	S 0 1									
	4	D 0 0 4	5,000	P	S 0 1	S 0 2	T 0 4							
	5	D 0 0 5	11,000	P	S 0 1	S 0 2	T 0 4							
	6	D 0 0 6	400,500	P	S 0 1	S 0 2	T 0 4							
	7	D 0 0 7	605,000	P	S 0 1	S 0 2	T 0 4							
	8	D 0 0 8	900,000	P	S 0 1	S 0 2	T 0 4							
	9	D 0 0 9	26,000	P	S 0 1	S 0 2	T 0 4							
1	0	D 0 1 0	2,500	P	S 0 1	S 0 2	T 0 4							
1	1	D 0 1 1	11,000	P	S 0 1	S 0 2	T 0 4							
1	2	D 0 1 2	1,000	P	S 0 1		T 0 4							
1	3	D 0 1 8	4,500	P	S 0 1		T 0 4							
1	4	D 0 1 9	4,500	P	S 0 1		T 0 4							
1	5	D 0 2 1	4,500	P	S 0 1		T 0 4							
1	6	D 0 2 2	1,500	P	S 0 1		T 0 4							
1	7	D 0 2 7	1,500	P	S 0 1		T 0 4							
1	8	D 0 2 8	2,500	P	S 0 1		T 0 4							
1	9	D 0 3 0	1,500	P	S 0 1		T 0 4							
2	0	D 0 3 2	1,500	P	S 0 1		T 0 4							
2	1	D 0 3 3	1,500	P	S 0 1		T 0 4							
2	2	D 0 3 4	1,500	P	S 0 1		T 0 4							
2	3	D 0 3 5	12,000	P	S 0 1		T 0 4							
2	4	D 0 3 6	1,500	P	S 0 1		T 0 4							
2	5	D 0 3 7	1,500	P	S 0 1		T 0 4							
2	6	D 0 3 8	1,500	P	S 0 1		T 0 4							
2	7	D 0 3 9	11,000	P	S 0 1		T 0 4							
2	8	D 0 4 0	11,000	P	S 0 1		T 0 4							
2	9	D 0 4 2	1,500	P	S 0 1		T 0 4							
3	0	D 0 4 3	1,500	P	S 0 1		T 0 4							
3	1	F 0 0 1	110,000	P	S 0 1									
3	2	F 0 0 2	110,000	P	S 0 1									
3	3	F 0 0 3	110,000	P	S 0 1									
3	4	F 0 0 5	110,000	P	S 0 1									
3	5	F 0 0 6	500	P	S 0 1									
3	6	F 0 0 7	500	P	S 0 1									
3	7	F 0 0 9	500	P	S 0 1									
3	8	P 0 0 3	1,500	P	S 0 1									
3	9	P 0 1 2	1,500	P	S 0 1									

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES	
				(1) PROCESS CODES (Enter code)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 55 (Continued)					
40	P 0 1 5	6,000	P	S 0 1	
41	P 0 2 9	1,500	P	S 0 1	
42	P 0 3 0	1,500	P	S 0 1	
43	P 0 3 1	1,500	P	S 0 1	
44	P 0 3 8	1,500	P	S 0 1	
45	P 0 5 6	3,000	P	S 0 1	
46	P 0 6 3	1,500	P	S 0 1	
47	P 0 6 8	1,500	P	S 0 1	
48	P 0 7 3	1,500	P	S 0 1	
49	P 0 7 6	1,500	P	S 0 1	
50	P 0 7 8	1,500	P	S 0 1	
51	P 0 9 5	1,500	P	S 0 1	
52	P 0 9 6	1,500	P	S 0 1	
53	P 0 9 8	1,500	P	S 0 1	
54	P 0 9 9	500	P	S 0 1	
55	P 1 0 6	1,500	P	S 0 1	
56	P 1 1 3	1,500	P	S 0 1	
57	P 1 2 0	1,500	P	S 0 1	
58	U 0 0 1	3,000	P	S 0 1	
59	U 0 0 2	1,500	P	S 0 1	
60	U 0 0 3	1,500	P	S 0 1	
61	U 0 1 2	1,500	P	S 0 1	
62	U 0 1 9	3,000	P	S 0 1	
63	U 0 2 2	1,500	P	S 0 1	
64	U 0 2 9	1,500	P	S 0 1	
65	U 0 3 1	1,500	P	S 0 1	
66	U 0 3 7	1,500	P	S 0 1	
67	U 0 4 4	1,500	P	S 0 1	
68	U 0 4 5	1,500	P	S 0 1	
69	U 0 5 2	1,500	P	S 0 1	
70	U 0 5 6	1,500	P	S 0 1	
71	U 0 5 7	1,500	P	S 0 1	
72	U 0 7 5	1,500	P	S 0 1	
73	U 0 7 7	1,500	P	S 0 1	
74	U 0 8 0	6,000	P	S 0 1	
75	U 1 0 3	500	P	S 0 1	
76	U 1 0 8	1,500	P	S 0 1	
77	U 1 1 2	1,500	P	S 0 1	
78	U 1 1 5	1,500	P	S 0 1	

9. Descriptions of Hazardous Wastes *(Continued. Use the Additional Sheet(s) as necessary; number pages as 5 a, etc.)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Qty of Waste	C. Unit of Measure (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)												D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 55 (Continued)																
7	9	U	1	1	7	1,500	P	S	0	1						
8	0	U	1	2	1	1,500	P	S	0	1						
8	1	U	1	2	2	1,500	P	S	0	1						
8	2	U	1	2	3	1,500	P	S	0	1						
8	3	U	1	3	1	1,500	P	S	0	1						
8	4	U	1	3	3	1,500	P	S	0	1						
8	5	U	1	3	4	6,000	P	S	0	1						
8	6	U	1	3	5	1,500	P	S	0	1						
8	7	U	1	4	0	1,500	P	S	0	1						
8	8	U	1	4	4	1,500	P	S	0	1						
8	9	U	1	5	1	6,000	P	S	0	1						
9	0	U	1	5	4	6,000	P	S	0	1						
9	1	U	1	5	9	6,000	P	S	0	1						
9	2	U	1	6	0	1,500	P	S	0	1						
9	3	U	1	6	1	1,500	P	S	0	1						
9	4	U	1	6	5	1,500	P	S	0	1						
9	5	U	1	6	9	1,500	P	S	0	1						
9	6	U	1	8	8	1,500	P	S	0	1						
9	7	U	1	9	0	1,500	P	S	0	1						
9	8	U	1	9	6	1,500	P	S	0	1						
9	9	U	2	0	4	1,500	P	S	0	1						
1	0	0	U	2	1	0	6,000	P	S	0	1						
1	0	1	U	2	1	1	6,000	P	S	0	1						
1	0	2	U	2	1	3	1,500	P	S	0	1						
1	0	3	U	2	1	6	1,500	P	S	0	1						
1	0	4	U	2	1	8	1,500	P	S	0	1						
1	0	5	U	2	1	9	1,500	P	S	0	1						
1	0	6	U	2	2	0	6,000	P	S	0	1						
1	0	7	U	2	2	5	1,500	P	S	0	1						
1	0	8	U	2	2	6	6,000	P	S	0	1						
1	0	9	U	2	2	7	1,500	P	S	0	1						
1	1	0	U	2	2	8	1,500	P	S	0	1						
1	1	1	U	2	3	9	1,500	P	S	0	1						
1	1	2	U	2	4	6	1,500	P	S	0	1						
1	1	3															
1	1	4															
1	1	5															
1	1	6															
1	1	7															

10. Map

Attach to this application a topographical map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in this map area. See instructions for precise requirements.

11. Facility Drawing

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

12. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

13. Comments

ATTACHMENT 2

Evaluation of potential seismic hazards from Holocene-age surface-rupturing faults at the Radioassay and Nondestructive Testing Facility (RANT), Building 38, Technical Area 54, Los Alamos National Laboratory

LA-UR-12-27035

Date: _____

Los Alamos NATIONAL LABORATORY EST.1943

memorandum

Earth and Environmental Sciences Division

To/MS: Mark Haagenstad, ENV-RCRA, MS K404
From/MS: Emily S. Schultz-Fellenz, EES-14, MS D452
Elizabeth Miller, EES-14, MS D452
Phone/Fax: 7-3605/Fax 7-1628
Document No: EES14-12-018
Date: December 18, 2012

Evaluation of potential seismic hazards from Holocene-age surface-rupturing faults at the Radioassay and Nondestructive Testing Facility (RANT), Building 38, Technical Area 54, Los Alamos National Laboratory

This memorandum summarizes geologic investigations at and around the Radioassay and Nondestructive Testing Facility, herein referred to as RANT or the RANT facility, Building 38, at Technical Area 54 (TA-54) of the Los Alamos National Laboratory (LANL) in Los Alamos County, New Mexico.

When selecting a site for a hazardous waste treatment, storage, and/or disposal facility, the owner/operator (in this case, LANS, LLC and NNSA) must adhere to certain location standards, as identified in the Code of Federal Regulations, Title 40 (40 CFR), Part 264.18. The guidelines used to demonstrate compliance with the seismic location standard are presented in 40 CFR, Part 270.14(b)(11).

In this document, we address compliance with the seismic location standard through published geologic data, beginning with a regional view of the Pajarito Plateau and ending with specific focus on the area to be permitted. We present a Pajarito Plateau-scale map of faults and aerial photographic lineaments located within a five-mile radius of the area to provide an overview of the structural setting and state of knowledge of the area. We discuss recent published mapping of the Pajarito fault system to determine the presence or absence of Holocene-aged surface-rupturing faults. We also include the following: field reconnaissance and analysis of aerial photography covering a 3,000-ft radius of the area; a discussion of microseismic monitoring at LANL; and a summarization of relevant published geologic studies completed in and around TA-54. These items are included to help evaluate Holocene seismic hazards, and provide important control on the known extent of faults in the area.

Definitions

The following technical terms are used frequently throughout this document. Definitions are taken from The Dictionary of Geological Terms (Bates and Jackson, eds., 1984).

Displacement: a general term for the relative movement of the two sides of a fault, measured in any chosen direction; also, the specific amount of such movement. [Within this report, “displacement” and “offset” are interchangeable terms.]

Holocene: an epoch of the Quaternary period, from the end of the Pleistocene, approximately 8 thousand years ago [*sic*; recent studies have updated the beginning of the Holocene to 11,700 years ago; *cf*. Gradstein et al. (2008); Ogg et al. (2008)] to the present time.

Lineament: a linear topographic feature of regional extent that is believed to reflect crustal structure. Examples are fault lines, aligned volcanoes, and straight stream courses.

Note that the definition of “lineament” used in this report primarily in the context of faulting does not imply that such an identified feature is actually a surficial manifestation of crustal structure with recent tectonic activity until the local geology is carefully considered.

General Geologic Setting

LANL and the Los Alamos townsite sit atop the Pajarito Plateau, which is bounded on its western edge by the Pajarito fault system, a 50-km-long system locally comprised of the down-to-the-east Pajarito fault (the master fault) and subsidiary down-to-the-west Rendija Canyon, Guaje Mountain, and Sawyer Canyon faults (Figure 1). This fault system forms the local active western margin of the Rio Grande rift near Los Alamos.

The RANT facility at TA-54 is situated on Mesita del Buey in the eastern part of LANL between Pajarito Canyon to the south and Cañada del Buey to the north (Figure 2). As mapped by Goff et al. (2002) on the Frijoles 7.5-minute quadrangle, the RANT facility is immediately underlain by highly-disturbed mesa top deposits of manmade origin, usually consisting of a mixture of older alluvium, tuffaceous rubble, native soil, and imported fill. Below this fill deposit, the local bedrock is the Quaternary Bandelier Tuff, formed in two eruptive pulses from nearby Valles caldera, the eastern edge of which is located approximately 8 miles (13.2 km) west of TA-54. The older member (Otowi Member) of the Bandelier Tuff has been dated at 1.61 Ma (Izett and Obradovich 1994). The younger member (Tshirege Member) of the Bandelier Tuff has been dated at 1.256 Ma (age from Phillips et al. 2007) and is widely exposed as the mesa-forming unit around Los Alamos. Several discrete subunits comprise the Tshirege Member. Commonly accepted stratigraphic nomenclature for the subunits of the Tshirege Member is described in detail by Broxton and Reneau (1995), Gardner et al. (2001), and Lewis et al. (2009). The Tshirege Member subunit exposed at the ground surface at TA-54 is Qbt2, and in select locations along Mesita del Buey, the underlying Qbt1 is also exposed in cliff faces. Unit Qbt3 pinches out immediately west of the RANT facility. Understanding the subtle differences between Tshirege Member cooling units and the nature of the contacts between cooling units is critical to identifying fault-generated displacements around the Pajarito Plateau.

Regional Structural and Seismic Studies

Lineament mapping

Before the campaign of detailed geologic mapping began at LANL in the mid 1990s, geologic studies performed prior to this time dominantly used lineament mapping from aerial photographs to infer the surface traces of the Rendija Canyon and Guaje Mountain faults as southward structural continuations through the Los Alamos townsite and through TA-55 and TA-63, respectively (including Rogers et al. 1996; Dransfield and Gardner 1985; Vaniman and Wohletz 1990; Wong et al. 1995; Olig et al. 1996; and Wohletz 2004). The traces of these faults are important, as they have been interpreted as the easternmost structural extent of the Pajarito fault system in the Los Alamos area (Lewis et al., 2009). For reference, the TA-55 and TA-63 technical areas are located approximately 2 miles (3.1 km) northwest of the RANT facility.

Studies by Gardner et al. (1998, 1999, 2008), Lewis et al. (2002, 2009), and Lavine et al. (2003, 2005) utilized the most widely-accepted and detailed published stratigraphy of the Bandelier Tuff (that of Broxton and Reneau 1995; published in peer-reviewed literature by Lewis et al. 2009) to map small displacements across Tshirege Member cooling unit contacts throughout much of western and central LANL for the purpose of identifying potential seismic surface rupture hazards in LANL technical areas. These relatively-recent studies acquired information on fault locations and amount of displacement using high-precision geodetic mapping of Tshirege Member subunit contacts along canyon exposures. These detailed mapping studies have shown that lineaments in this area are not expressed as young surface-rupturing components of the Rendija Canyon and Guaje Mountain faults through the TA-55 and TA-63 areas. In fact, the surface trace of the Rendija Canyon fault bends southwesterly at Los Alamos Canyon and splays into TA-3 instead of continuing southerly through TA-55 (Gardner et al., 1999). The surface expression of the Guaje Mountain fault is not identifiable in contact displacement to the south of Pueblo Canyon (Lavine et al., 2003).

While lineament mapping has been completed at a regional scale across much of the Pajarito Plateau, we emphasize that for determining the presence of Holocene faults at a given location, conventional field geologic mapping or paleoseismic trenching must be consulted or performed to confirm that (1) a lineament is truly a fault, and (2) that it displaces young units. Olig et al. (1998) supports this:

> "The lineaments [from Wong et al. (1995), Plate 1] were identified on aerial photographs or observed during an aerial reconnaissance and field-checked at a reconnaissance level. However, this generalized map … should be considered preliminary in nature until a more comprehensive and detailed surficial mapping of LANL is completed."

Geologic quadrangle mapping

The New Mexico Bureau of Geology and Mineral Resources, in conjunction with the US Geological Survey's National Cooperative Geologic Mapping Program (STATEMAP), published a geologic and structural map of the Frijoles 7.5-minute quadrangle (LANL and Bandelier National Monument area) at 1:24,000 scale (Goff et al. 2002). This investigation did not find surficial geologic faults that disrupt the Bandelier Tuff or younger units in the vicinity (e.g., within 3,000 ft) of the proposed facilities at TA-54. As noted above, the RANT facility is immediately underlain by highly-disturbed mesa top deposits of manmade origin, on the order of three to six feet (1-2 m) thick.

Other geologic mapping

The Pajarito fault system was mapped at 1:1,200 scale by personnel with a detailed knowledge of structural geology and Tshirege Member subunits, and that work published by Lewis et al. (2009) represents a culmination of considerable detailed geologic investigations by the LANL Seismic Hazards Geology Team performed on the Pajarito Plateau since the mid 1990s. Plate 1 shows the RANT facility at TA-54, a 3,000-foot buffer, a five-mile buffer around the facility (as mandated by 40 CFR 270.14(b)(11)(A)(2)), published mapped surface faults from Goff et al. (2002) and Lewis et al. (2009), and mapped lineaments from Vaniman and Wohletz (1990) and Wong et al. (1995). The surficial faults mapped by Lewis et al. (2009) and seen on Plate 1 represent the most recent and detailed state of published knowledge of the Pajarito fault system near LANL.

No surficial faults with lateral continuity associated with the Pajarito fault system fall within the 3,000 ft buffer surrounding the RANT facility, as shown on Figure 4 and Plate 1. The closest mapped fault associated with the main trace of the master Pajarito fault is approximately 5.5 miles (8.8 km) to the west of the RANT facility. The closest mapped fault with lateral surface continuity in proximity to RANT is a trace of the antithetic Rendija Canyon fault mapped through TA-41 and TA-2, approximately 2.7 miles (4.3 km) northwest of the RANT facility. The closest mapped point-offset (an individual location where offset on a geologic contact was identified but lateral or vertical continuity of displacement along a fault plane was not visible) is a site in TA-66 approximately 1.9 miles (3 km) west-northwest of the RANT facility. Points of offset were found to be notable features in geologic field investigations (e.g., Gardner et al. 1999, 2001; Lavine et al., 2003), but these features were also found to have little to no lateral continuity, could not be traced down or up through the stratigraphic section, were not visible as surficial offset, could not be followed across mesa-tops through conventional geologic mapping, and were not found to displace geologic units younger than the tuff (younger than 1.256 Ma).

Microseismic monitoring

The Los Alamos Seismic Network (LASN) continuously monitors local earthquake activity in the Los Alamos area in support of LANL's Seismic Hazards program. Seismic monitoring of LANL facilities is a requirement of DOE Order 420.1B (Facility Safety). LASN currently consists of several permanent seismic instrument field stations that telemeter real-time sensitive ground motion data to a central recording facility. These stations include broadband microseismic, broadband seismo-acoustic, broadband strong motion, short-period microseismic, and short-period

seismo-acoustic monitoring stations. Four short-period microseismic monitoring stations are located on LANL property, and five seismic stations (including a strong-motion vertical array) are located within five miles of TA-54. Other stations are in remote locations in the Jemez Mountains, St Peters Dome, and the Caja del Rio Plateau across the Rio Grande, with additional stations currently under construction or in various stages of installation. The network has been detecting and archiving seismic events from 1973 to present, and the most recent earthquake catalogue is described by Roberts et al. (2012)(a) and (b). During the operational duration of LASN through 2011, over 750 clearly locatable earthquakes were recorded in northern New Mexico. Over 200 of these were located within a 50-km radius of Los Alamos, and roughly 90 of those were within 20 km. Figure 3 shows the current LASN station locations and the seismic events recorded in the area from 1973 to 2011. Because the LASN station spatial coverage is limited, and stations on LANL property are plagued by cultural noise (e.g., construction activities, explosive shots), there can be issues with earthquake identification and location errors. Misidentification of recorded events as local earthquakes is very rare. When it does occur, the most common cause is that LANL test explosions and distant earthquakes occasionally generate signals that can mimic the characteristics of local earthquakes. The events are then reviewed and revised as necessary. A revised version of the LASN earthquake catalogue has been presented by Roberts et al. 2012(a) and (b).

No earthquakes detected by LASN have been epicentered within 3,000 feet of TA-54 during the network's 39 years of operation.

Published geologic studies of relevance to seismic hazards issues at TA-54

Several geologic investigations have taken place at LANL with specific focus on TA-54. Data from some of these area-specific studies provide constraint on the location, size, distribution, and implications of known faults with relation to the RANT facility. This document summarizes some key geological studies below, in chronological order by publication date.

- **Purtymun and Kennedy 1971**, Geology and Hydrology of Mesita del Buey [report number LA-4660]

  This report describes the geology, structure, and hydrology of the TA-54 area for basic background and geologic site characterization. Purtymun and Kennedy (1971) identified three dominant joint sets at field sites around TA-54: 310° to 330° (N50W to N30W); 280° to 300° (N80W to N60W); and 40° to 60° (N40E to N60E). The authors described these joints as tensional, formed by the contraction of the tuff as it cooled, based upon the joints' near-vertical attitudes and curvilinear trends. Purtymun and Kennedy (1971) used borehole data to identify a sequence of basalts underlying the Bandelier Tuff that thin towards the west across Mesita del Buey. They describe the older, Cerros del Rio-aged basalts as a paleo-topographic high over which the Bandelier Tuff was deposited.

- **Rogers 1977**, History and Environmental Setting of LASL Near-Surface Land Disposal Facilities for Radioactive Wastes (Areas A, B, C, D, E, F, G, and T): A Source Document [report number LA-6848-MS, 2 vols.]

  This report consolidated a vast amount of historic and geologic information on the beginnings and growth of material disposal areas around LANL. Here, we discuss in general geologic characterizations of pits located at TA-54 that were available at the time of Rogers' (1977) report publication. MDAs H and J, nearest to the RANT facility, were not yet developed at the time of this publication.

  Some faults were identified in pits at TA-54; however, the displacements on these faults are quite small (less than 6 in), they did not have lateral continuity (could not be correlated to larger fractures or geologic structures), and the age of displacement could only be determined as younger than 1.2 Ma (the age of the

Bandelier Tuff). The characterized pits that were investigated provided geologic data suggesting a wide range of fracture orientations, near-vertical fracture dips, narrow apertures, and some minor faulting with offsets of less than a foot since the deposition of the Bandelier Tuff. These small-displacement faults with no documented lateral continuity do not pose a seismic hazard to the RANT facility, and can be attributed to cooling and compaction of the tuff shortly after emplacement.

- **Dransfield and Gardner 1985**, Subsurface Geology of the Pajarito Plateau, Española Basin, New Mexico [report number LA-10455-MS]

  This report provides a description of geologic structure in units predating the Bandelier Tuff, based upon drill cores and geophysical surveys across the Pajarito Plateau. They note the presence of numerous down-to-the-west faults averaging 100 ft of displacement within basalts below TA-54. Cumulatively, 600 ft of displacement was identified along the sequence of pre-Bandelier Tuff faults. One of the easterly subsurface faults, near to the TA-54 area, correlates to a gravity inflection. This gravity anomaly may indicate the western margin of the thick basalt sequence underlying the Bandelier Tuff, as identified in the cross-section from Purtymun and Kennedy (1971). None of these pre-Bandelier Tuff faults propagate upwards into the Bandelier Tuff or younger units.

- **Reneau et al. 1998**, Structure of the Tshirege Member of the Bandelier Tuff at Mesita del Buey, Technical Area 54, Los Alamos National Laboratory [report number LA-13538-MS]

  This study was performed to determine the presence or absence of faults at TA-54 through use of high-precision geodetic surveying of the Qbt1v – Qbt2 contact along the flanks of Mesita del Buey. Reneau et al. (1998) identified widely-distributed, small-scale faults at Mesita del Buey along a 2.2 mile traverse of the north wall of Pajarito Canyon and a 0.4 mile traverse of the north wall of a tributary to Cañada del Buey. A total of 37 faults with offsets ranging from 5 to 65 cm (2 to 25 in) were recorded in a zone between the eastern edge of MDA J in the west and MDA G in the east, with the highest density of observed faults in the vicinity of MDA L where pyroclastic surge beds were well exposed and continuous. The western boundary of MDA L is approximately 4500 ft (1400 m) southeast of the RANT facility. Typical fault offset across the study area was 20 to 30 cm (8 to 12 in) and all observed fault planes were steeply dipping. Since the exposure of the Qbt1 – Qbt2 contact was incomplete along the canyon wall traverses, Reneau et al. (1998) postulate that several additional faults of similar magnitude to those identified may exist in obscured areas. 65% of observed offset on identified faults was down-to-the-west, while the remaining 35% of observed offset was down-to-the-east. Opposing fault displacements partially compensate for each other, reducing cumulative offset along the surveyed transects. These identified faults were not concentrated in discrete areas or zones.

  The general absence of large (> 2ft) displacements along the Qbt1v – Qbt2 contact suggests that these small-displacement structures are not associated with major fault zones. Reneau et al. (1998) suggest that these small-displacement faults may record secondary deformation across the Pajarito Plateau associated with large earthquakes on the main Pajarito fault, several miles to the west, or even perhaps earthquakes on other regional faults. The small single offsets, reduced cumulative offset due to opposing fault displacements, lack of lateral continuity of these small faults across the mesa, no displacements of units younger than the Bandelier Tuff along similar fractures, and lack of mapped laterally-continuous faults in other geologic studies correlative to these identified faults support the statement that these small faults do not pose a seismic hazard to the RANT facility.

- **Various borehole studies**

To constrain groundwater flow patterns and directions and for monitoring purposes, a number of wells exist around TA-54. During drilling, these wells were logged and core recovered. This section describes geologic information from wells within 3,000 ft of the RANT facility.

Well logs from water supply hole PM-2 (Purtymun, 1995) help constrain the subsurface geology beneath TA-54 and the nearby RANT facility. Well PM-2 is located approximately 2650 ft (807 m) south-southeast of the RANT facility. The logs for well PM-2 from Purtymun (1995) and used by Goff et al. (2002) demonstrate that the Tshirege Member of the Bandelier Tuff is over 200 ft thick at this location, and the Otowi Member (including the Guaje Pumice) is approximately 200 ft thick. The Cerro Toledo interval, a volcaniclastic unit variably present above the Otowi Member and below the Tshirege Member, is less than 10 ft thick at this location. Nearly 2,000 ft of Cerros del Rio basaltic units of variable thickness interbedded with Santa Fe Group sediments underlie the Bandelier Tuff units in this area. No faults were identified through this borehole characterization effort.

Stratigraphic descriptions from borehole PM-4 (G. WoldeGabriel, personal communication, 11/15/2012) show similar subsurface geology to that identified in borehole PM-2. This borehole is located approximately 2000 ft (610 m) north of the RANT facility. No faults were identified in this borehole.

One of the nearby regional characterization wells is R-20, located approximately 3700 ft (1.3 km) southeast of the RANT facility, east of TA-18 on the south side of Pajarito Road, in the bottom of Pajarito Canyon. This well was drilled as part of the Groundwater Protection Program. The well summary data sheet indicates the drilling efforts encountered a significant thickness (68 ft) of alluvium, nearly 100 ft of Tshirege Member, approximately 15 ft of Cerro Toledo Interval, nearly 200 ft of Otowi Member, 18 ft of Guaje Pumice, and large thicknesses of Cerros del Rio basalts underlain by Puye Formation deposits to a depth of 1242 ft. No faults were identified in the completion report for this well.

Another nearby regional characterization well is R-37, located approximately 2000 ft (610 m) east of the RANT facility, along the north side of Mesita del Buey and adjacent to the southern side of Cañada del Buey, about 0.25 mi east of MDA J. This well was drilled as part of the Groundwater Protection Program. The well summary data sheet indicates the drilling efforts encountered nearly 230 ft of Tshirege Member, approximately 3 ft of sediments attributed to the Cerro Toledo Interval, nearly 260 ft of Otowi Member, 11 ft of Guaje Pumice, and large thicknesses of Cerros del Rio basalts (433 ft) underlain by Puye Formation deposits to a total depth of 1100 ft. No faults were identified in the completion report for this well.

Also nearby is regional characterization well R-40, located approximately 2100 ft (640 m) south-southeast of the RANT facility, east of TA-18 on the north side of Pajarito Road, near the bottom of Pajarito Canyon. This well was drilled for the LANL Water Stewardship Program to monitor potential releases from MDA H. The well summary data sheet indicates the drilling efforts encountered 40 ft of alluvium, 114 ft of Tshirege Member, approximately 18 ft of sediments attributed to the Cerro Toledo Interval, nearly 260 ft of Otowi Member, 18 ft of Guaje Pumice, and large thicknesses of Cerros del Rio basalts (nearly 350 ft) underlain by Puye Formation deposits to a total depth of 910 ft. No faults were identified in the completion report for this well.

Local Lineament Mapping and Field Reconnaissance at TA-54 and Surrounding Canyons

We present a local lineament map (Plate 2) of the 3,000-ft buffer area surrounding the RANT facility at TA-54. Present on both Plates 1 and 2 are lineaments from Wong et al. (1995; yellow lines) and Vaniman and Wohletz (1990; orange lines) that trend roughly north-south, as well as lineaments mapped in this study using color orthophotography (red dotted lines). The lineaments mapped by Wong et al. (1995) and Vaniman and Wohletz

(1990) were identified using aerial photographs.

Plate 2 shows two northeast-striking lineament traces, one mapped by Wong et al. (1995) and the other mapped by this study, transecting the 3,000 ft buffer around the RANT facility. These lineaments project through the northwestern quadrant of the buffer area. The lineaments identified on Plate 2 do not correlate to any Holocene faults or measured point-locations of offset on Bandelier Tuff subunit contacts.

Figure 4 is a map showing faults in the vicinity of the proposed RCRA-permitted RANT facility area, with 200-ft (orange) and 3,000-ft (blue) buffers for RCRA seismic considerations. This map shows there are no faults within the 200-ft or 3,000-ft buffers around the RANT facility.

Discussion

Site-specific geologic investigations in the TA-54 area, described above, show that the lineaments mapped through TA-54 on Plates 1 and 2 do not correlate with any Holocene faults. Neither geologic investigations in the TA-54 area, nor geologic mapping in the Los Alamos and White Rock areas show Holocene faults in areas where lineaments have been identified on Plates 1 and 2. Detailed geodetic surveying of the Qbt1 – Qbt2 contact by Reneau et al (1998) did find small-displacement faulting along the mesa edge between the eastern edge of MDA J and MDA L, but did not locate faults within 200 ft of the RANT facility. Lineaments found in the TA-54 area do not appear to correlate with displacement of the Bandelier Tuff or younger units.

Goff et al. (2002) notes that the RANT facility area is largely underlain by highly-disturbed fill units of manmade origin. The creation of these fill deposits likely has modified or removed any undisturbed post-Bandelier Tuff deposits. Without undisturbed native deposits younger than the Bandelier Tuff, conducting future geologic field investigations with the purpose of identifying Holocene movement across faults (e.g., paleoseismic trenching, borehole investigations) would be challenging, if not unachievable, in the immediate area around the RANT facility.

Conclusions

No faults have been documented within 200 ft of the RANT facility in western TA-54. Two lineaments, mapped by Wong et al. (1995) and this study, project within the 3,000 ft buffer around the RANT facility. These mapped lineaments do not correlate to identifiable displacements on Tshirege Member subunit contacts. Additionally, these lineaments do not correspond to faults that exhibit movement in Holocene time, and they do not have clear connections to small local faults or major regional faults. Therefore, these features do not pose a seismic hazard to the RANT facility. Based on the data presented in this memo using information from published geologic studies at and around TA-54, aerial reconnaissance of the area within a five-mile radius from the RANT facility, an analysis of aerial photographs, and field reconnaissance of lineaments and contact elevations, we demonstrate that no faults with Holocene displacement are present within 200 ft of the RANT facility. Aerial reconnaissance, detailed geologic mapping of portions of LANL, and paleoseismic trenching investigations show that the focus of possible Holocene faulting is concentrated along the main Pajarito fault, over five miles west of the RANT facility.

Figure Captions

Figure 1. Map of the RANT facility with respect to the Pajarito fault system in the vicinity of Los Alamos National Laboratory (green outline). Location of TA-54 is highlighted as a red bordered area; RANT facility location labeled and shown as pink polygon within TA-54. Inset map shows approximate location of Rio Grande rift. Proposed RCRA-permitted RANT facility area is shown in greater detail in Figure 2. **PF** = Pajarito fault; **RCF** = Rendija Canyon

fault; **GMF** = Guaje Mountain fault; **SCF** = Sawyer Canyon fault. Fault mapping (bold black lines) from Goff et al. (2002) and Lewis et al. (2009).

Figure 2. Map view of the location of the RANT facility within TA-54. The TA-54 technical area shown in inset map. The region proposed for RCRA permitting is shown as a pink shaded area with a red ball-bar border. The 200 ft buffer is a bold orange line surrounding the RANT facility. The Pajarito Canyon watershed lies to the south of the technical area; Cañada del Buey and its tributaries lie north of the RANT facility. MDAs H and J are shaded green with a black border.

Figure 3. Map of earthquakes recorded by the Los Alamos Seismic Network (LASN) from 1973 to 2011. Individual earthquake epicenters shown as purple circles; relative circle size indicates earthquake magnitude. Recent, news-worthy October 2011 Cuyamungue earthquake labeled and show in red. TA-54 and approximate location of RANT facility location shown. Active LASN stations shown as blue triangles. See report text for further discussion.

Figure 4. Mapped faults and point-locations of offset, with respect to the 200 ft (orange) and 3,000 ft (blue) buffers surrounding the RANT facility (red polygon at center of map). No faults are mapped within the 200 ft or 3,000 ft buffers. See text for further discussion.

Plate 1. Mapped faults, mapped lineaments, and color orthophotographic map of the Pajarito Plateau. Buffers of 3,000 feet (blue circle) and five miles (pink circle) around the RANT facility at TA-54 are shown. Structural mapping (bold black lines) from Goff et al. (2002) and Lewis et al. (2009). Mapped lineaments from Vaniman and Wohletz (1990; orange lines), Wong et al. (1995; yellow lines), and this study (red dotted lines). TA-54 is east of the main trace of the Pajarito fault system. See text for further discussion.

Plate 2. Mapped faults, mapped lineaments, and orthophotography in the area surrounding the RANT facility. Lineaments from Vaniman and Wohletz (1990; orange lines), Wong et al. (1995; yellow lines), and this study (red dotted lines). Two separate lineaments project into the 3,000 ft buffer (blue circle) around the RANT facility. These lineaments do not project within the 200 ft buffer (red line) surrounding the facility. See text for further discussion.

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Distribution

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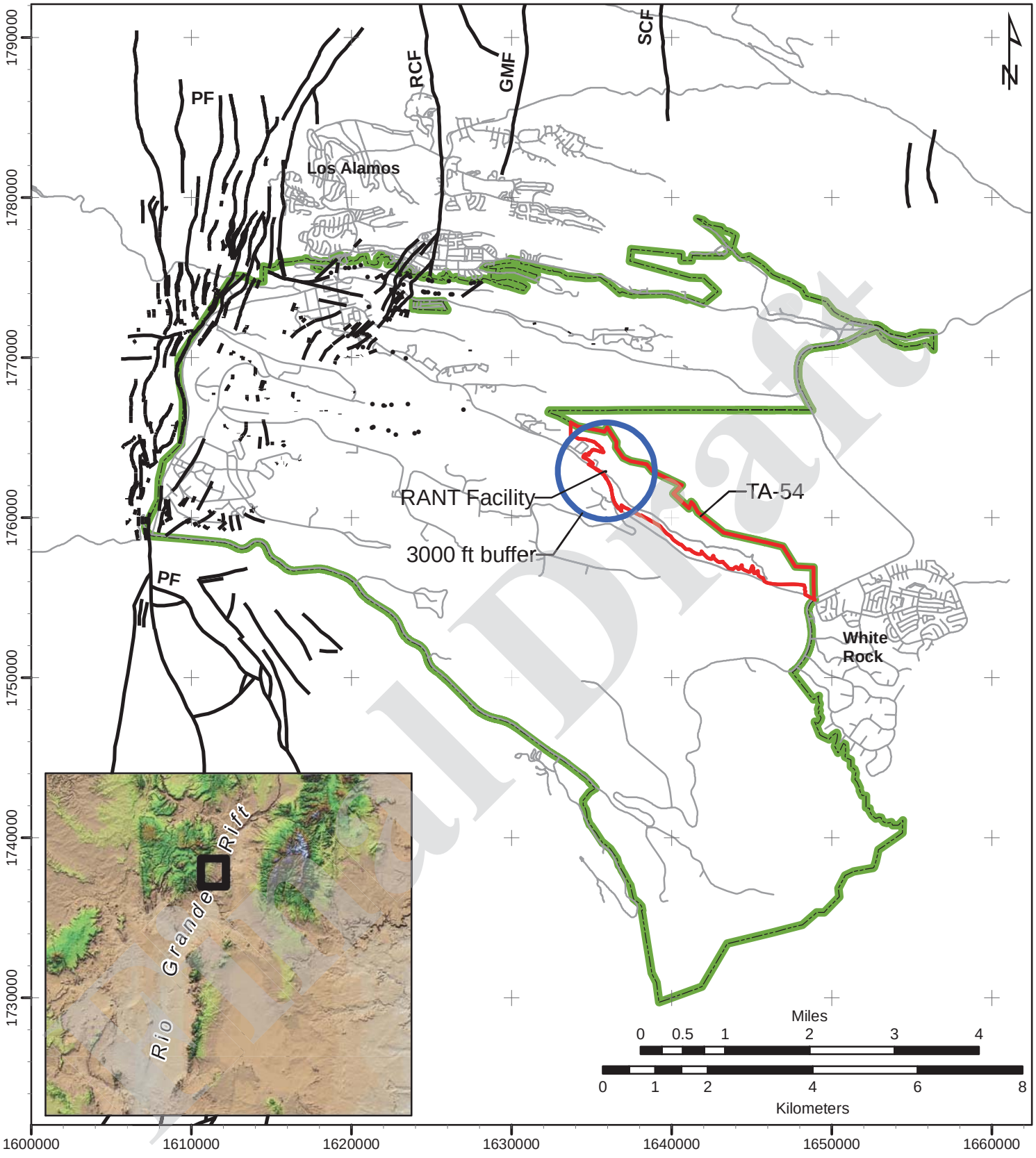
Attachments (4 figures; 2 plates)



- Identified offset
- Fault
- Road
- RANT facility
- 3000' buffer
- Technical Area 54
- LANL

Figure 1: Map of the RANT facility with respect to the Pajarito Fault System in the vicinity of Los Alamos National Laboratory

State Plane Coordinate System
New Mexico Central Zone
1983 North American Datum
Grid Provides Units in Feet

LA-UR-12-27035
GISLab Map No. m202391
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Document No. EES14-12-018
Cartography by Liz Miller
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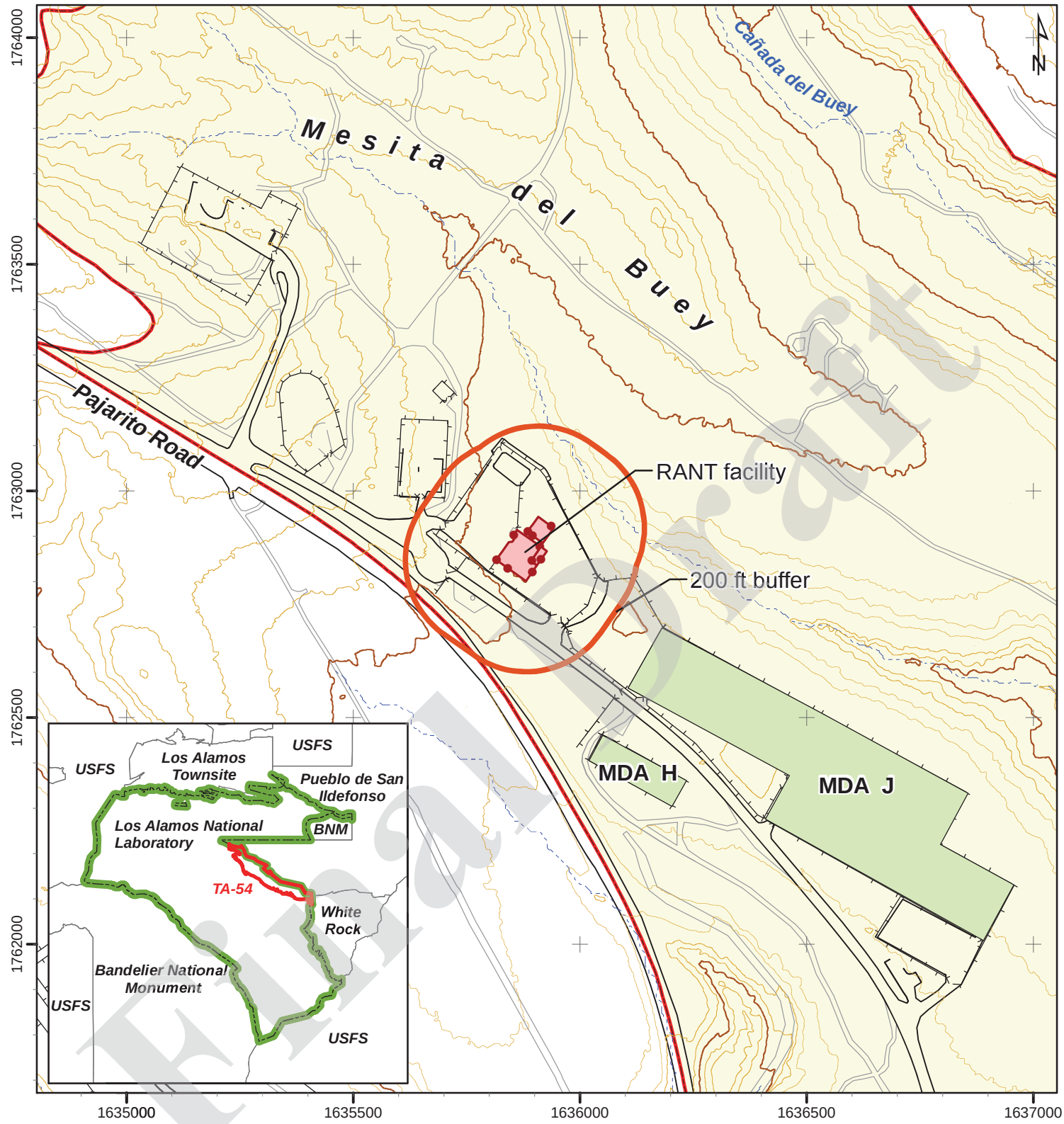

- Drainage
- Paved road
- Dirt road
- Fence
- Material disposal area
- 200' buffer
- RANT facility
- Technical Area 54 boundary

Figure 2. Details of RCRA-Permitted Area of RANT facility, TA-54

LA-UR-12-27035

State Plane Coordinate System
New Mexico Central Zone
1983 North American Datum
Grid Provides Units in Feet
Contour interval = 10 feet

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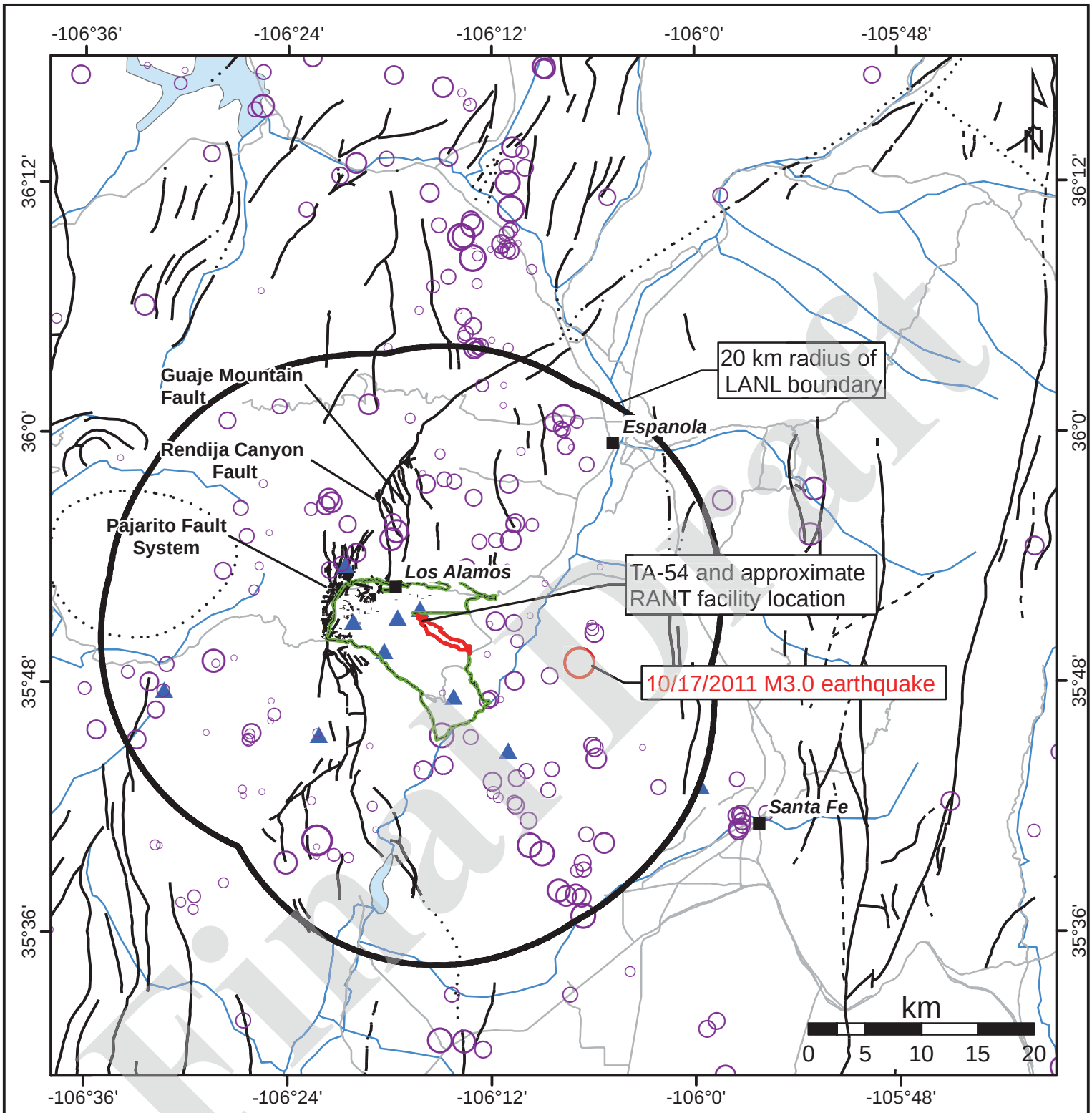
Feet
0 125 250 500 750 1,000

0 0.05 0.1 0.2 0.3 0.4
Kilometers

GISLab Los Alamos National Laboratory



Earthquake magnitude

- 0
- 1
- 2
- 3
- Los Alamos Seismic Network station
- Technical Area 54
- LANL

Figure 3. Greater Los Alamos Area Seismic Events

218 Total Local Earthquakes (1973 - 2011)
87 Earthquakes within 20-km Radius of LANL
Purple Circles: Earthquake Locations and Magnitudes

State Plane Coordinate System
New Mexico Central Zone
1983 North American Datum
Grid Provides Units in Feet

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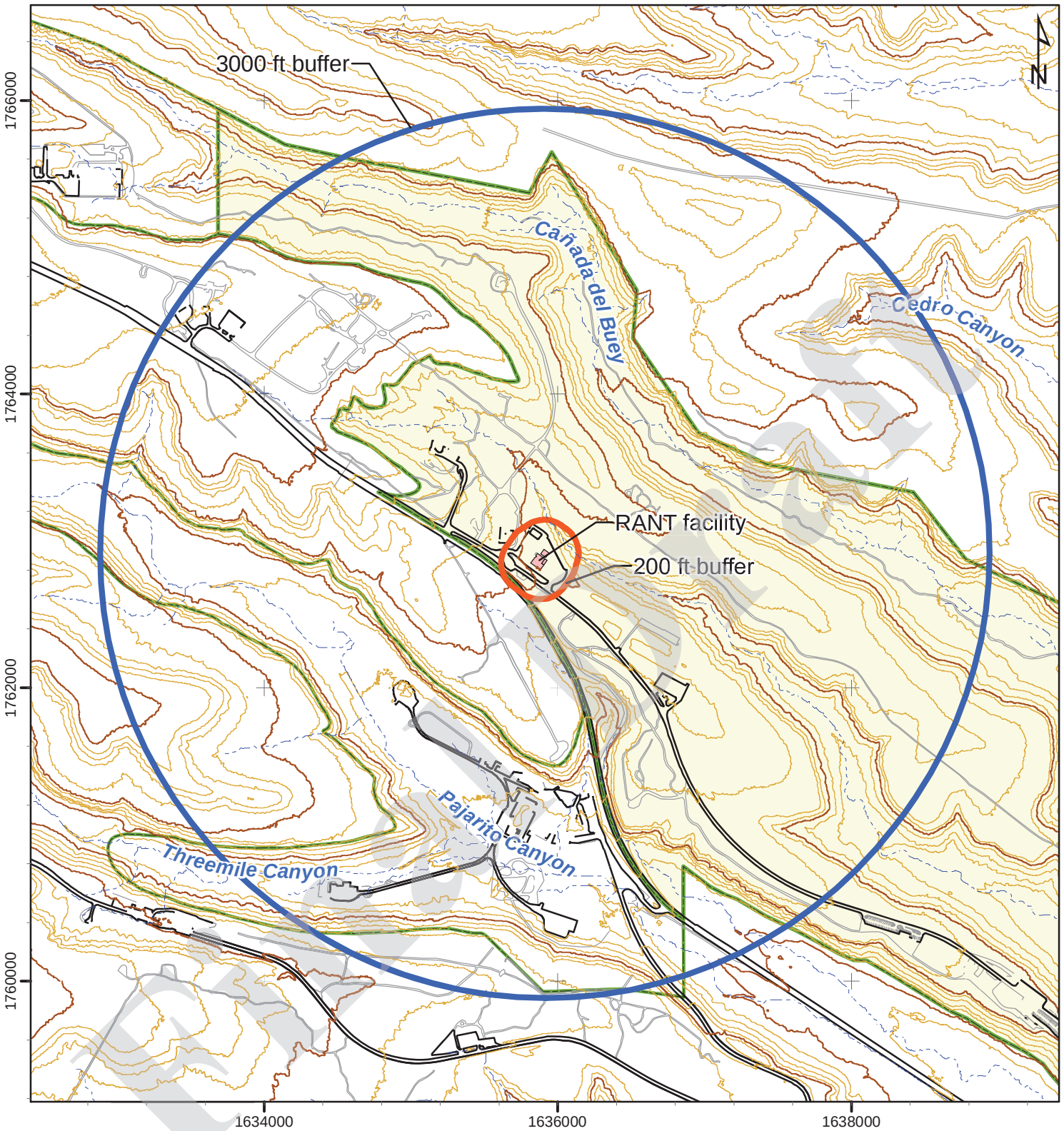

Figure 4. Mapped faults with respect to 200' and 3000' RCRA buffers surrounding the RANT facility, TA-54

- Identified offset
- Fault
- Drainage
- 20 ft contour
- 100 ft contour
- Paved road
- Parking
- Dirt road
- 200' buffer
- 3000' buffer
- RANT facility
- Technical area boundary
- Technical Area 54

Miles
0 0.05 0.1 0.2 0.3 0.4
0 0.1 0.2 0.4 0.6 0.8
Kilometers

State Plane Coordinate System
New Mexico Central Zone
1983 North American Datum
Grid Provides Units in Feet
Contour interval = 20 feet

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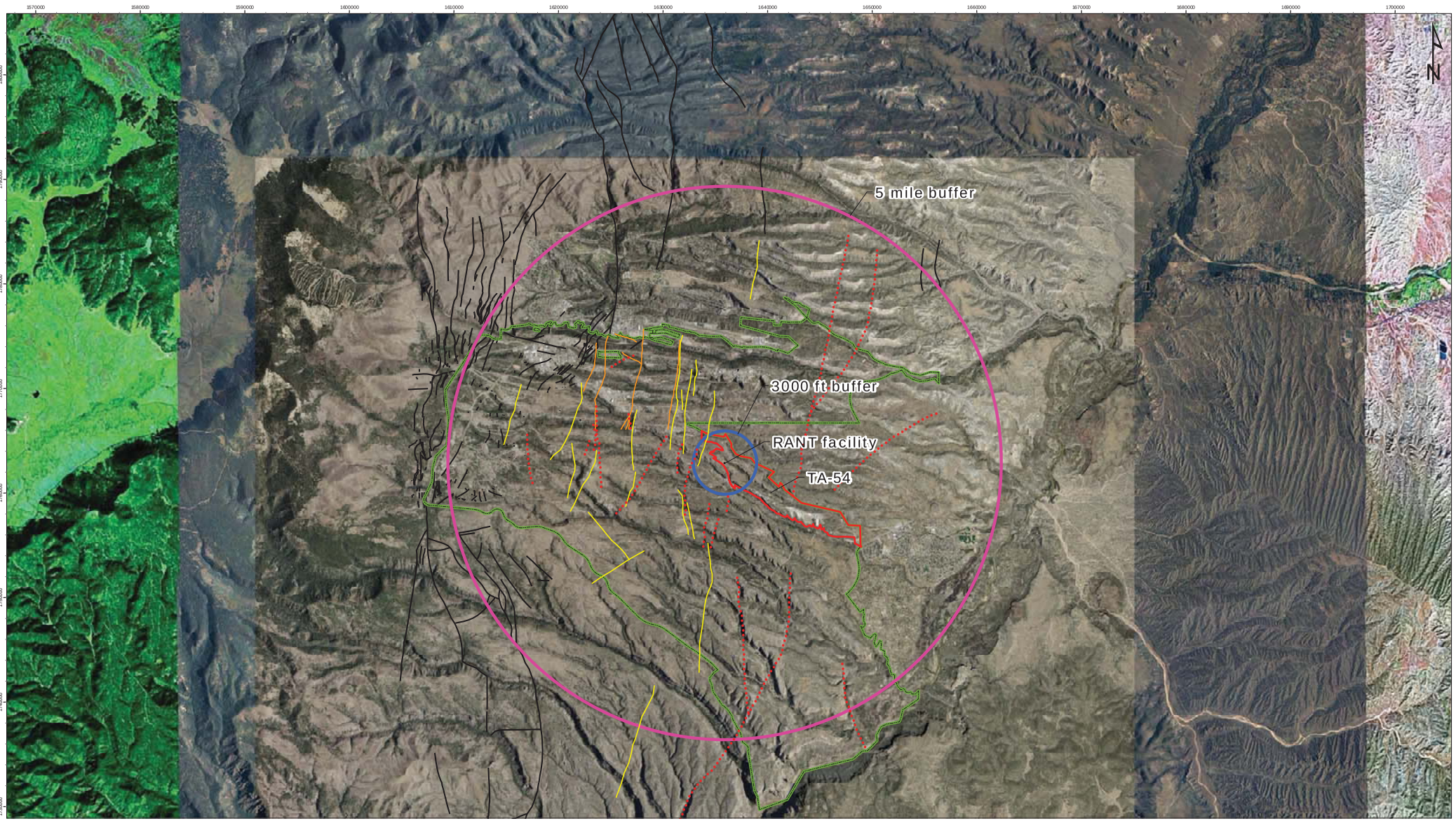

Fault
Linear features
Lineaments, Vaniman & Wohletz, 1990
Lineaments, Wong, et al, 1995
RANT facility
3000' buffer
5 mile buffer
Technical Area 54
LANL

Plate 1: Faults, lineaments, and color orthophotographic map of the Pajarito Plateau

Miles
0 0.5 1 2 3 4
0 1 2 4 6 8
Kilometers

State Plane Coordinate System
New Mexico Central Zone
1983 North American Datum
Grid Provides Units in Feet

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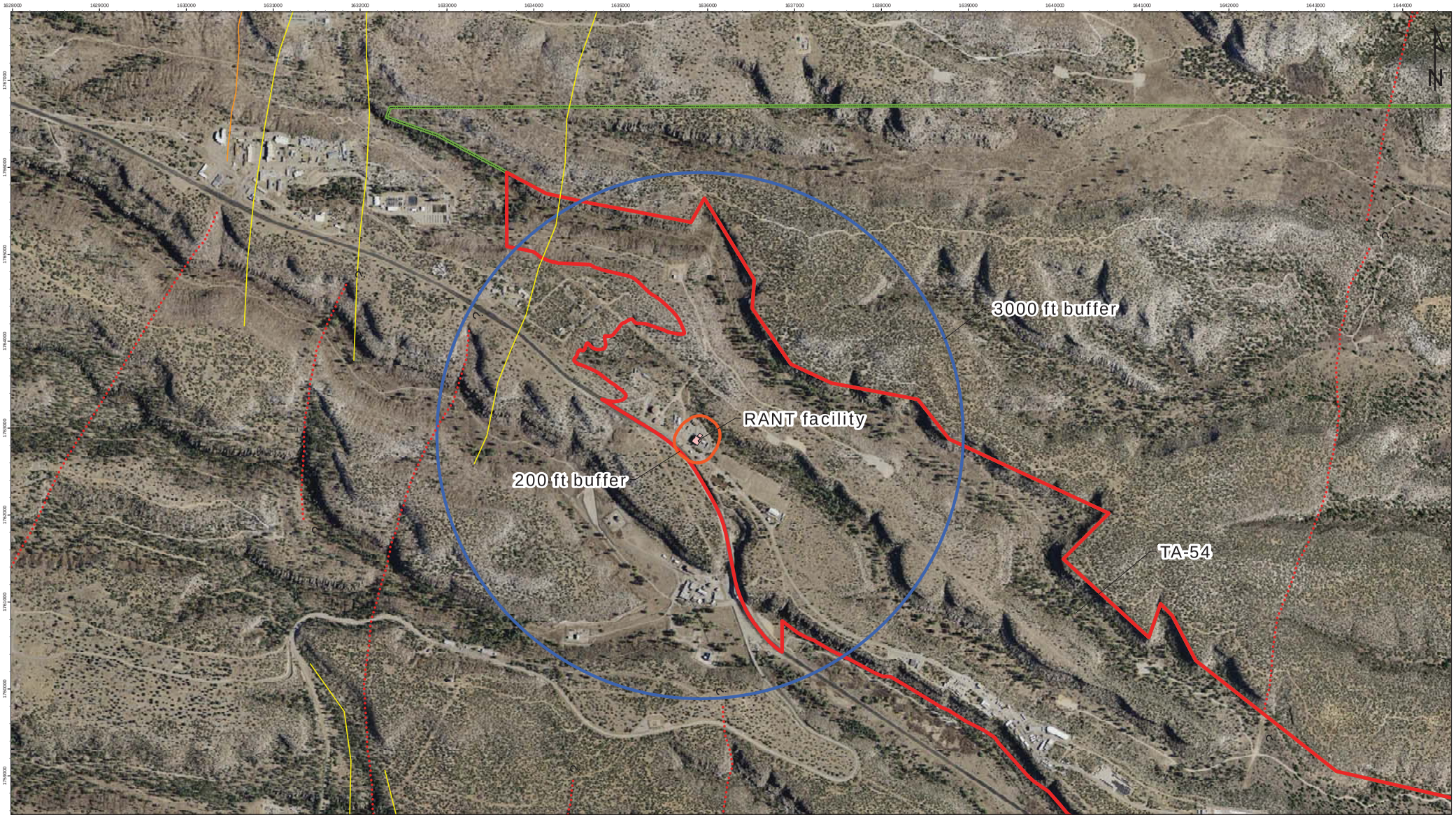

- Identified Offsets
- Faults
- Linear features
- Lineaments, Vaniman & Wohletz, 1990
- Lineaments, Wong, et al, 1995
- RANT facility
- 200' buffer
- 3000' buffer
- TA-54
- LANL

Plate 2: Faults and lineaments with respect to the RANT facility, TA-54

Feet
0 350 700 1,400 2,100 2,800
0 100 200 400 600 800
Meters

State Plane Coordinate System
New Mexico Central Zone
1983 North American Datum
Grid Provides Units in Feet

LA-UR-12-27035
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