Los Alamos
NATIONAL LABORATORY
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ESHID-602143-01

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National Nuclear Security Administration
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Date: JAN 3 1 2017
Symbol: EPC-DO: 17-016
LA-UR: 16-29615
Locates Action No.:

John E. Kieling, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Request for Class 2 Permit Modification for the Addition of Three Hazardous Waste Management Units at Technical Area 55, Los Alamos National Laboratory Hazardous Waste Facility Permit

Dear Mr. Kieling:

The purpose of this letter is to submit to the New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB) a request for a Class 2 permit modification to the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (the Permit). The Permit was issued to the Department of Energy (DOE) and Los Alamos National Security, LLC (LANS), the Permittees, in November 2010 (EPA ID # NM0890010515).

Please note that a portion of the proposed permit modification (contained in the envelope marked "UCNI") contains Unclassified Controlled Nuclear Information (UCNI) as defined pursuant to federal law. The UCNI figures and photographs, which are submitted as confidential information in compliance with Title 40 Code of Federal Regulations (CFR) § 270.12 requirements, are for the use of the NMED-HWB only. This information must be used and stored appropriately according to Atomic Energy Act Section 148 requirements. If there are any questions as to what type of arrangements are required for federally-compliant storage or management of UCNI information, please contact the Permittees.

This permit modification requests the addition of three storage units to Technical Area (TA) 55. The three units include two rooms in Building TA-55-4 and the conversion of the TA-55-355 High Efficiency Neutron Counter (HENC) Pad into a hazardous waste outdoor storage pad. These changes include minor text revisions to Permit Part 3, *Storage in Containers*; the facility description in Attachment A, *Unit Descriptions;* Attachment B, *Part A Application;* emergency equipment changes in Attachment D, *Contingency Plans;* addition of the three units in Attachment J, *Hazardous Waste Management Units;*

addition of closure plans for each of the units in Attachment G, *Closure Plans* and the addition of figures in Attachment N, *Figures*, of the Permit.

The Permittees have prepared this permit modification in accordance with 40 CFR §270.42(b). The changes made to the Permit as part of this modification all fall under the conditions of Appendix I of 40 CFR §270.42 Item F.1.b, for Class 2 permit modifications. A full description of the permit modifications, rationale for the classification type, the necessary permit revisions, and a signed certification page have been included in Enclosure 1.

Provided herein are three hard copies of the permit modification request package as well as an electronic version which will be delivered to the NMED-HWB. The hardcopy submittal contains pages or sections where text has been changed rather than copies of full attachments of the Permit. The electronic copy will only be provided to NMED-HWB and contains a reproduction of the hardcopy in portable document format (PDF) along with all the word processing and figure files used to create the hardcopy.

In addition the fact sheet (Enclosure 2) will be sent to the NMED-HWB maintained LANL facility mailing list within 7 days of transmittal of this request. The fact sheet contains the location and date of a scheduled public meeting; and a notice will be published in several local newspapers containing the same information this modification will be put into effect and notice will be sent to the NMED-HWB-maintained LANL facility mailing list in accordance with 40 CFR §270.42(b)(2) within 7 days of transmittal of this request.

If you have comments or questions regarding this permit modification, please contact Karen Armijo, DOE, at (505) 665-7314 or Mark Haagenstad, LANS, at (505) 665-2014.

Sincerely,

John C. Bretzke
Division Leader
Environmental Protection and Compliance Division
Los Alamos National Security, LLC

Sincerely,

Karen E. Armijo
Permitting and Compliance Program Manager
National Nuclear Security Administration
Los Alamos Field Office
U.S. Department of Energy

JCB:KEA/lm: am

Enclosures: Permit Modification Request Technical Area 55 Hazardous Waste Storage Units

Copy:
Laurie King, USEPA/Region 6, Dallas, TX (E-File)
Neelam Dhawan, NMED/HWB, Santa Fe, NM, (E-File)

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Siona Briley, NMED/HWB, Santa Fe, NM, (E-File)
Darlene S. Rodriguez, NA-LA, (E-File)
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This permit modification requests the addition of three storage units to Technical Area (TA) 55. The three units include two rooms in Building TA-55-4 and the conversion of the TA-55-355 High Efficiency Neutron Counter (HENC) Pad into a hazardous waste outdoor storage pad. These changes include minor text revisions to Permit Part 3, *Storage in Containers*; the facility description in Attachment A, *Unit Descriptions;* Attachment B, *Part A Application;* emergency equipment changes in Attachment D, *Contingency Plans;* addition of the three units in Attachment J, *Hazardous Waste Management Units;*

January 2017

LA-UR-16-29615

Permit Modification Request
Technical Area 55
Hazardous Waste Storage Units

Prepared by:

Los Alamos National Laboratory

Environmental Protection & Compliance – Compliance Program Group

Los Alamos, New Mexico 87545

Revision 0

Permit Modification Request
Technical Area 55
Hazardous Waste Storage Units

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Prepared by:
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Environmental Protection & Compliance – Compliance Program Group
Los Alamos, New Mexico 87545

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SECTION 1

1.0 INTRODUCTION

This Class 2 permit modification requests the addition of three hazardous waste storage units to the Los Alamos National Laboratory Hazardous Waste Facility Permit (U.S. Environmental Protection Agency (EPA) (Identification Number NM0890010515)) hereinafter referred to as the Permit, issued by the New Mexico Environment Department (NMED) in November 2010, (NMED, 2010). Los Alamos National Laboratory (LANL or the Facility) is owned and co-operated by the U.S. Department of Energy (DOE) and Los Alamos National Security, LLC (LANS), collectively the Permittees. This modification request was prepared in accordance with requirements of Permit Part 1.6.2 (20.4.1.900 New Mexico Administrative Code (NMAC)) specific to the Technical Area (TA) 55-0355 Pad and rooms B13 and G12 located in the basement of TA-55, Building 4 (TA-55-4). The 20.4.1 NMAC adopts, with a few exceptions, all of the Code of Federal Regulations, Title 40, (40 CFR) Parts 260 to 266, Part 268, Part 270, and Part 273. Because of this, regulatory citations in this document reference the appropriate federal hazardous waste regulations. Table 1-1 provides a list of regulatory references and their corresponding locations in this permit modification request or previous applications.

The Permit contains many of the conditions addressing the requirements of the New Mexico Hazardous Waste Act (NMHWA) and implementing regulations, specifically 40 CFR, that are common to all LANL hazardous waste management units. The relevant sections of the Permit are referenced throughout this document. Together, information provided in this document and in the Permit will meet the applicable requirements specified in 40 CFR Parts 264 and 270 for the proposed unit.

Table 1-1. Regulatory Crosswalk

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§270.13	Part A permit application	2013 LANL General Part A[1] Updated form included as Attachment A of this permit modification request. Attachment C of this permit modification request includes the changes to the form in redline	Yes
§270.14(b)(1)	General facility description	2003 TA-55 General Part B[2], Attachment A, Section A.1 and Section 3.1 of this permit modification request	Yes
§270.14(b)(2)	Chemical and physical analysis of hazardous waste	Permit[3] Section 2.4 and Permit[3] 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[3] Section 2.4 and Permit[3] 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[3] Section 2.5 and Permit[3] Attachment A, Sections A.5.10	No
§264.14	Security procedures and equipment	Permit[3] Section 2.5 and Permit[3] Attachment A, Sections A.5.10	No
§270.14(b)(5)	General inspection schedule	Permit[3] Section 2.6 and Permit[3] Attachment E	No
§264.15(b)	General inspection schedule	Permit[3] Section 2.6 and Permit[3] Attachment E	No
§264.174	Inspections/containers	Permit[3] Section 2.6 and Permit[3] Attachment E	No
§264.193(i)	Tank inspections	NA[4]	NA[4]
§264.195	Overfill control inspections	NA[4]	NA[4]
§264.226	Surface impoundment monitoring and inspection	NA[4]	NA[4]
§264.254	Waste pile monitoring and inspection	NA[4]	NA[4]
§264.273	Land treatment and operating requirements	NA[4]	NA[4]

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§264.303	Landfill monitoring and inspection	NA[4]	NA[4]
§264.602	Monitoring, analysis, inspection, response, reporting, and corrective action	NA[4]	NA[4]
§264.1033	Process vent standards	NA[4]	NA[4]
§264.1052	Equipment leak air emission standards	NA[4]	NA[4]
§264.1053	Compressor standards	NA[4]	NA[4]
§264.1058	Standards for pumps, valves, pressure relief devices, flanges, and connections	NA[4]	NA[4]
§264.1084	Air emission standards: tanks	NA[4]	NA[4]
§264.1085	Air emission standards: surface impoundments	NA[4]	NA[4]
§264.1086	Air emission standards: containers	Permit[3] Section 3.9 and Permit[3] Attachment E, Section E.8	No
§264.1088	Inspection and monitoring requirements	Permit[3] Section 3.9 and Permit[3] Attachment E, Section E.8	No
§270.14(b)(6)	Request for waiver from preparedness and prevention requirements of 264 Subpart C	NA[4]	No
§264.30-34 & 37	Preparedness and prevention: applicability, design and operation, required equipment, testing and maintenance of equipment, access to communications or alarm systems, and arrangements with local authorities	Permit Section 2.10 Section 3.0 of this permit modification request	Yes
§264.35	Required aisle space	Permit[3] Section 3.5.1(1)	No
§264.227	Surface impoundment emergency repairs	NA[4]	NA[4]
§264.200	Air emissions standards for tanks	NA[4]	NA[4]

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§270.14(b)(7)	Contingency Plan	Revisions to Permit[3] Attachment D, Tables D-2 (TA-55 Building 4 Basement) and D-3 (TA-55-0355 (Pad)) are included in Attachment C of this permit request	Yes
§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	Revisions to Permit[3] Attachment D, TA-55, Tables D-2 (TA-55 Building 4 Basement) and D-3 (TA-55-0355 (Pad)) are included in Attachment C of this permit request	Yes
§270.14(b)(8)	Description of preparedness and prevention	Permit[3] Section 2.10	No
§270.14(b)(8)(i)	Hazard prevention in unloading operations	Permit[3] Section 3.11.2 and Attachment A, Sections A.3.1 & A.4	No
§270.14(b)(8)(ii)	Runoff prevention	Permit[3] Attachment A, Section A.4.6 2003 TA-55 Part B[2], Attachment G, Section G.2	No
§270.14(b)(8)(iii)	Prevent contamination of water supplies	2003 TA-55 Part B[2], Attachment J, Section J.3.3	No
§270.14(b)(8)(iv)	Mitigation of equipment failure and power outages	2003 TA-55 Part B[2], Attachment J, Section J.3.4	No
§270.14(b)(8)(v)	Prevention of undue exposure of personnel to hazardous waste	2003 TA-55 Part B[2], Attachment J, Section J.3.5	No
§270.14(b)(8)(vi)	Prevention of releases to the atmosphere	2003 TA-55 Part B[2], Attachment J, Section J.3.6	No
270.14(b)(9)	Prevention of accidental ignition or reaction of ignitable, reactive, or incompatible wastes	Permit[3] Section 2.8	No

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§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[3] Section 2.8	No
§270.14(b)(10)	Traffic pattern: volume, controls, and access	2003 TA-55 Part B[2], Attachment A.2	No
§270.14(b)(11)	Facility/unit identification and location information	Section 3.0 of the Permit Modification Request	Yes
§270.14(b)(11)(i)	Seismic standard applicability [40 CFR §264.18(a)]	Section 3.6.1 and Attachment B of the Permit Modification Request	Yes
§270.14(b)(11)(ii)	Seismic standard requirements	Section 3.6.1 and Attachment B of the Permit Modification Request	Yes
§270.14(b)(11)(ii)(A)	No fault within 3,000 feet (ft.) with displacement in Holocene time	Section 3.6.1 and Attachment B of the 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 f.t of portions of the facility where treatment, storage, or disposal will be conducted	Section 3.6.1 and Attachment B of the Permit Modification Request	Yes
§264.18(a)	Seismic considerations	Attachment B of the Permit Modification Request	Yes
§270.14(b)(11)(iii)	100-year floodplain standard	2003 TA-55 Part B[2], Attachment A.3.2	No
§270.14(b)(11)(iv)(A-C)	Facilities located within the 100-year floodplain	NA[4]	NA
§270.14(b)(11)(v)	Compliance schedule for 40 CFR §264.18(b)	NA[4]	NA[4]
§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	Attachment D of the Permit Modification Request	Yes

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§264, Subpart G	Closure and post-closure	Attachment D of the Permit Modification Request	Yes
§264.178	Closure/containers	NA[4]	NA[4]
§264.197	Closure and post-closure care/tanks	NA[4]	NA[4]
§264.228	Surface impoundments	NA[4]	NA[4]
§264.258	Waste piles	NA[4]	NA[4]
§264.280	Land treatment	NA[4]	NA[4]
§264.310	Landfills	NA[4]	NA[4]
§264.351	Incinerators	NA[4]	NA[4]
§264.603	Requirements by the Secretary	NA[4]	NA[4]
§270.14(b)(14)	Deed restrictions/post-closure notices (40 CFR §264.119)	NA[4]	NA[4]
§270.14(b)(15)	Closure cost estimate (40 CFR §264.142)	NA[4]	NA[4]
§270.14(b)(16)	Post-closure cost estimate (40 CFR §264.144)	NA[4]	NA[4]
§270.14(b)(17)	Liability insurance (40 CFR §264.147)	NA[4]	NA[4]
§270.14(b)(18)	Proof of financial coverage (40 CFR §264.149-150)	NA[4]	NA[4]
§270.14(b)(19)	Topographic map requirements	2013 LANL General Permit Part Application Rev 7.0	No
§270.14(b)(19)(i)	Map scale and date	2003 TA-55 Part B[2], Attachment A	No
§270.14(b)(19)(ii)	100-year floodplain area	2003 TA-55 Part B[2], Attachment A	No
§270.14(b)(19)(iii)	Surface waters	2013 LANL General Permit Application Part A Application Rev 7.0 (Map 3)	No
§270.14(b)(19)(iv)	Surrounding land uses	Permit[4] Attachment N, Figures 1, 2, & 3 2013 General Permit Application Rev 7.0 (Map 1)	No
§270.14(b)(19)(v)	Wind rose	2003 TA-55 Part B[2], Attachment A, Figures A-6 and A-7	No
§270.14(b)(19)(vi)	Map orientation	2003 TA-55 Part B[2], Attachment A	No

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§270.14(b)(19)(vii)	Legal boundaries	2003 TA-55 Part B[2], Attachment A-8 2013 LANL General Permit Application Rev 7.0 (Map 1)	No
§270.14(b)(19)(viii)	Access control	2003 TA-55 Part B[2], Attachment A, Figure A-8 Permit[4] Attachment N, Figure 10	No
§270.14(b)(19)(ix)	Wells	Figure 3-11 of the Permit Modification Request	Yes
§270.14(b)(19)(x)	Buildings	Figures 3-2, 3-7, and 3-9 of the Permit Modification Request 2013 General Permit Application Rev 7.0 (Map 2)	Yes
§270.14(b)(19)(xi)	Drainage barriers or flood control	Figure 3-12 of this Permit Modification Request	Yes
§270.14(b)(19)(xii)	Location of operational units	Figure 3-1 of this Permit Modification Request	Yes
§270.14(b)(20)	Considerations Under Federal Law	Section 3.6.3 of this Permit Modification Request	Yes
§270.3(a)	Wild and Scenic Rivers Act	Section 3.6.3 of this Permit Modification Request	Yes
§270.3(b)	National Historic Preservation Act	Section 3.6.3 of this Permit Modification Request	Yes
§270.3(c)	Endangered Species Act	Section 3.6.3 of this Permit Modification Request	Yes
§270.3(d)	Coastal Zone Management	Section 3.6.3 of this Permit Modification Request	Yes
§270.3(e)	Fish and Wildlife Coordination Act	Section 3.6.3 of this Permit Modification Request	Yes
§270.3(f)	Executive Orders	Section 3.6.3 of this Permit Modification Request	Yes
§270.14(b)(21)	Notice of extension approval for land disposal facilities	NA[4]	NA[4]
§270.14(b)(22)	A summary of the pre-application meeting	NA[4]	NA[4]
§270.14(c)	Groundwater monitoring requirements for regulated units	2003 TA-55 Part B[2], Attachment A	No

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§270.14(d)	Information requirements for SWMUs	2003 TA-55 Part B[2], Section 4.0	No
§270.14(d)(2)	Information on releases from SWMUs	2003 TA-55 Part B[2], Section 4.0	No
§270.14(d)(3)	RCRA Facility Assessment sampling and analysis results	NA[4]	NA[4]
§270.15	Information requirements for containers	Permit[3] Part 3	No
§270.15(a)	Description of containment system	Permit[3] Section 3.7	No
§270.15(b)	Storage areas holding wastes that do not contain free liquids	Permit[3] Section 3.7, and Permit[3] Attachment A, Section A.5	No
§264.171	Condition of containers	Permit[3] Part 3	No
§264.172	Compatibility of waste with containers	Permit[3] Part 3	No
§264.173	Management of containers	Permit[3] Part 3	No
§264.175(a-c)	Containment	Units comply with containment requirements of Permit[3] Section 3.7 A general description of the units is located at Permit[3] Attachment A, Sections A.5	No
§270.15(c)	Requirements for ignitable, reactive, and incompatible wastes	Permit[3] Sections 2.8	No
§270.15(d)	Requirements for incompatible wastes	Permit[3] Section 2.8	No
§264.176	15-meter storage buffer for ignitable or reactive wastes	Permit[3] Section 2.8	No
§264.177(a)	Incompatible wastes in containers	Permit[3] Section 2.8	No
§264.177(b)	Incompatible wastes in containers	Permit[3] Section 2.8	No
§264.177 (c)	Incompatible wastes separation or segregation	Permit[3] Section 2.8	No
§264.17 (b)	Prevention of reactions	Permit[3] Section 2.8	No
§264.17(c)	Documentation of precautions for ignitable, reactive or incompatible waste	Permit[3] Sections 2.8	No

Regulatory Citation(s) 40 CFR	Description of Requirement	Location of Documentation	Revision or Supplementary Information
§270.15(e)	Information on air emission control equipment	Permit[3] Section 3.9 and Permit[3] Attachment E, Section E.8	No
§270.27	Air emission controls for containers	Permit[3] Section 3.9 and Permit[3] Attachment E, Section E.8	No
§270.16	Information requirements for tank systems	NA[4]	NA[4]
§270.17	Information requirements for surface impoundments	NA[4]	NA[4]
§270.18	Information requirements for waste piles	NA[4]	NA[4]
§270.19	Information requirements for incinerators	NA[4]	NA[4]
§270.20	Information requirements for land treatment facilities	NA[4]	NA[4]
§270.21	Information requirements for landfills	NA[4]	NA[4]
§270.62	Hazardous waste incinerator permits	NA[4]	NA[4]
§270.63	Permits for land treatment demonstrations using field test or laboratory analysis	NA[4]	NA[4]

[1] General Part A Permit Application (Revision 7) for the Los Alamos National Laboratory, EPA ID # NM0890010515, November 2013 (WM-DO-13-0075, ERID-251209).

[2] Resource Conservation and Recovery Act (RCRA), Technical Area (TA-55) Part B Permit Application Submittal – Los Alamos National Laboratory (LANL, 2003), EPA ID No. NM 890010515.

[3] Requirement of information is also addressed in the *Hazardous Waste Facility Permit Issued by the New Mexico Environment Department to Los Alamos National Laboratory*, EPA No. NM0890010515, November 2010.

[4] Not applicable.

SECTION 2

2.0 OVERVIEW OF CLASS 2 PERMIT MODIFICATION REQUEST

This Class 2 permit modification request (PMR) is drafted for the addition of three hazardous waste management units located at Technical Area (TA) 55 to the Permit. The information within this document and its attachments address the relevant permit application requirements of 40 CFR Part 270, Subpart B. The three units to be permitted consist of the TA-55-0355 Pad and two rooms (B13 and G12) located in the basement of TA-55-4.

2.1 PERMIT MODIFICATION OUTLINE

This permit modification request is organized as follows:

- Section 1.0: Includes an introduction to the PMR and a crosswalk of the regulatory requirements associated with the units proposed to be permitted.
- Section 2.0: Overview of Class 2 Permit Modification Request
- Section 3.0: Includes a description of the TA-55-0355 Pad, rooms B13 and G12, as well as addressing environmental performance standards, waste characterization, security, preparedness, hazards prevention, emergency equipment, inspection requirements, and recordkeeping requirements.
- Section 4.0: Includes closure requirements for rooms B13, G12, and TA-55-0355 Pad.
- Section 5.0: Contains a list of references used throughout this document.
- Section 6.0: Contains the certification statement and signatures for this PMR as required by 40 CFR § 270.11.

Attachments included with this PMR provide detailed information to meet regulatory requirements. These attachments include the following:

- Attachment A: Part A Form
- Attachment B: Seismic Report for the TA-55 Facility
- Attachment C: Modifications to the LANL Hazardous Waste Facility Permit – Redline
- Attachment D: TA-55 Closure Plans
- Attachment E: TA-55-0355 Pad Design Drawings

2.2 CLASS 2 PERMIT MODIFICATION REQUIREMENTS

The 40 CFR §270.42(b) requirements state that the Permittees shall submit a modification request to the Department that:

- Describes the exact changes to be made to the permit conditions and supporting documents referenced by the Permit;

- Identifies that the modification is a Class 2;
- Explains why the modification is needed; and
- Provides the applicable information required by 40 CFR §270.14.

Sections 2.2.1 through 2.2.3 provide the information required by the first three bullets above. The remainder of the document contains the application information that is required by the fourth bullet above. Table 1-1 outlines each of the regulatory references and the location where the information can be found in historical documentation and/or within this permit modification request.

2.2.1 PROPOSED CHANGES TO BE MADE

Attachment C contains proposed changes to the Permit that incorporate descriptions and site specific equipment and procedures for this unit. Additional and revised text is proposed for Permit Parts and Attachments. The Permit sections proposed for revision include:

- Permit Part 3, *Storage in Containers*
- Permit Attachment A, *Technical Area (TA) – Unit Descriptions*
- Permit Attachment B, *Part A Application*
- Permit Attachment D, *General Contingency Plan*
- Permit Attachment J, *Hazardous Waste Management Units*
- Permit Attachment N, *Figures*

The proposed changes to the Permit incorporate permit conditions appropriate for the new units as suggested by the Permittees to meet 40 CFR §270.32 for operation of the hazardous waste management units in a manner that protects human health and the environment. Proposed changes may be subject to further revisions following the NMED review.

The TA-55-0355 Pad was constructed in 2005. Design drawings are included in Section 3.0 of this permit modification request to illustrate the construction details for the TA-55-0355 Pad. 40 CFR §270.14(a) requires that design drawings submitted with waste management unit applications for approval be certified by a qualified Professional Engineer. The drawings in this permit modification request have been certified by Professional Engineers registered in the State of New Mexico. These engineers were responsible for the preparation of the drawings in support of the design process for the units.

Design drawings for rooms B13 and G12 are not included in this permit modification request, as the building already includes several permitted storage areas, and the TA-55-4 Building meets the requirements in Permit Section 1.9.20.

2.2.2 PURPOSE OF THE PERMIT MODIFICATION

The intent of this Class 2 permit modification request (PMR) is to add three hazardous waste storage units (TA-55-0355 Pad, rooms B13 and G12) to the Permit.

Transuranic (TRU) waste shipments from LANL are not expected to resume until September 2017. The number of shipments available to LANL will not meet projected generation rates until ventilation modifications are completed at the Waste Isolation Pilot Plan (WIPP), currently forecasted for 2020. Current projected shipment estimates are much less than historic practices due to changes at WIPP. With the TA-55 current inventory and projected waste generation rate, one shipment per week will take years to deplete LANL's TRU and mixed transuranic (MTRU) waste inventory. A large number of the TRU waste inventory at TA-55 includes Pipe Overpack Containers (POCs) containing combustibles. As stated in the *Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant, Rev. 8*, dated July 5, 2016, POCs containing combustible material are not accepted at WIPP. This is due to new testing on the POC integrity. Additionally, the Transuranic Waste Facility (TWF) at TA-63 has yet to become operational and although storage capability at TWF will help, half of the containers that are already in inventory at TA-55 are not WIPP compliant. TWF was designed to be a TRU waste certification facility and not a long term storage facility. Movement of waste, including POCs containing combustibles from one LANL permitted unit to another is ineffective, unless this type of waste is being relocated for certification for acceptance at WIPP or for repackaging purposes.

A subset of containers currently stored at TA-55 will require management at the Waste Characterization, Reduction, and Repacking Facility (WCRRF) prior to being WIPP-compliant as the waste acceptance criteria for WIPP has changed since the waste was generated. WCRRF is currently undergoing readiness assessments to begin treatment operations and the processing of waste containers currently stored at TA-54, Area G. At this time, these waste containers are scheduled with priority in support of the anticipated closure of the storage units at TA-54 Area G. Therefore, those containers currently stored at TA-55 that require management for shipment to WIPP, will remain in storage at TA-55 until WCRRF processing becomes operational and available.

In addition to the limitations for off-site shipment of the current waste stockpile, the restart for TA-55-4 operations began in August 2015 and full restart of activities commenced on August 18, 2016. TA-55 is a part of LANL's strategic role regarding support of the DOEs Stockpiles Stewardship Program that is administered by the National Nuclear Security Administration (NNSA) and nuclear defense and research programs. The Laboratory will continue to execute long-term planning for TA-55-4 operations. With the return of full operations at TA-55-4, an anticipated increase in the generation of MTRU and TRU waste is expected. Also, in order to meet current and future mission needs, modernization of the facility is required, that includes the removal of dated gloveboxes and other equipment. These larger size containers that contain this type of equipment are also being stored, and will continue to be stored at the current permitted outdoor unit, limiting storage capacity for operations generated waste. In

order for the oversize waste to be shipped off-site, the waste will require resizing and/or repackaging. Currently those capabilities are not available at TA-55.

The intended use of the proposed storage units will not only facilitate continued mission-critical operations at TA-55, but will also provide additional storage for the increase in hazardous and MTRU waste.

2.2.3 JUSTIFICATION FOR CLASSIFICATION

The addition of the three proposed units will result in up to and no greater than a 2% increase in the Facility's storage capacity. This Class 2 PMR will be initiated pursuant to 40 CFR 270.42, Appendix I, Item F.1.b. The capacity for the three units (TA-55-0355, rooms B13 and G12) combined is approximately 94,545 gallons (gal.) (1,719 drum or drum equivalent D/DE). The total current capacity for existing, permitted hazardous waste storage units at the Facility, as listed in Table J-1, *Active Portion of the Facility* in Attachment J, *Hazardous Waste Management Units, of the Permit,* is 5,135,602 gal. (~93,374 D/DE).

SECTION 3

3.0 FACILITY REQUIREMENTS

This section of the permit modification request addresses general requirements for TA-55 that are not currently in the Permit. If the information is contained in the Permit it is not discussed in this request. Information provided that is specific to the units to be permitted include: waste management unit descriptions, preparedness and prevention, emergency equipment, and a listing and locations for required topographic maps.

3.1 DESCRIPTION OF THE PROPOSED WASTE MANAGEMENT UNITS

The three proposed waste management units in this application will provide additional storage for hazardous and mixed wastes. The three proposed units (Figure 3-1) are existing structures and consist of rooms B13 and G12 that are located in the basement of Building 4 (TA-55-4) and the TA-55-0355 Pad. Table 3-1 identifies each of the units requesting to be permitted, including the location and maximum storage capacity. The units will provide container storage for hazardous waste, including the hazardous component of mixed transuranic (MTRU) waste and mixed low-level (MLLW) waste streams. These units may also manage hazardous-only waste streams generated at TA-55. The information provided in this section is submitted to address the applicable requirements of 40 CFR § 270.14(b)(1).

Table 3-1. TA-55 Proposed Units to be Permitted

Waste Management Unit Name	Location	Capacity (gallons)
TA-55-0355 Pad	Southwest of TA-55-4	84,370
Room B13	TA-55-4, Basement	4,950
Room G12	TA-55-4, Basement	5,225

3.1.1 TA-55-0355 PAD

The TA-55-0355 Pad, formerly known as the Safe Secure Transportation (SST) Pad, was constructed in 2005. The TA-55-0355 Pad is located outside and south of the Outdoor Storage Pad and TA-55-4. It is a concrete pad with a variable thickness of 4 to 6 inches and dimensions of 130 ft. long and 115 ft. wide. The pad also includes a steel roof structure with dimensions of approximately 93 ft. long and 63 ft. wide. A mobile High-Energy Neutron Counter (HENC), three safes for the storage of HENC calibration sources, and miscellaneous support equipment, such as fork lifts, are currently located on the TA-55-0355 Pad. The HENC unit is used to validate the radioactive content of waste drums intended for shipment to the Waste Isolation Pilot Plant (WIPP). The HENC system and associated equipment occupy only a portion of the pad area, leaving ample space for the proposed storage unit.

The proposed permitted boundary includes the area underneath the canopy and the north and south areas bordering the canopy. The dimensions of the proposed permitted boundary are approximately 130 ft. long and 103 ft. wide. Waste storage will not occur on the sloped east and western sides. The permitted boundary will be demarcated in accordance with Permit

Section 3.5(2). Waste will be stored in accordance with Permit Section 3.5.1. Two walls with roll up doors for wind protection will be installed on the south and west sides of the canopy. Therefore, the two ft. emergency egress will be maintained along these two sides in accordance with Permit Section 3.5.1(1). See Figure 3-2 for a plan view of the TA-55-0355 Pad. The TA-55-0355 Pad will consist of one waste management unit. The Permittees intend to eventually remove the HENC unit and the associated safes from the pad. As a result, the maximum storage capacity on the pad was calculated based on the utilization of the entire area directly underneath the canopy as well as the north and south areas bordering the canopy as depicted in Figure 3-3. The maximum storage capacity is determined to be 84,370 gallons or the equivalent of 1,534 - 55 gallon drums. The waste will be stored in:

- 30-, 55-, and 85- gallon drums;
- standard waste boxes (SWBs); and
- large waste boxes.

Approximate storage configuration is shown in Figure 3-3. No containers with free liquids will be stored on the pad; therefore, secondary containment will not be necessary.

Design drawings for the pad and the canopy are included for TA-55-0355 as Figures 3-4, 3-5 and 3-6, in this permit modification request to illustrate the construction details for the unit structures. The construction and design was completed in 2005 in accordance with 40 CFR §270.14(a). Additional design drawings for TA-55-0355 Pad are included as Attachment E of this permit modification request. These drawings have been certified by Professional Engineers registered in the State of New Mexico. These engineers were responsible for the preparation of the drawings in support of the design process for the units.

3.1.2 ROOM B13

Room B13 is located in the northeast side of the TA-55-4 basement. This storage room is rectangular in shape with doors located on each end of the room (495 $ft.^2$) (Figure 3-7). The maximum storage capacity of this unit is 4,950 gallons or the equivalent of 90 drums (55-gallons). The types of waste containers holding hazardous or mixed waste that will be stored in Room B13 includes 30-, 55- and 85-gallon drums and SWBs. Waste will be stored as shown in the configuration in Figure 3-8. The permitted boundary will be demarcated in accordance with Permit Section 3.5(2). No containers with free liquids will be stored in the unit, so secondary containment will not be necessary.

3.1.3 ROOM G12

Room G12 is located in the southwest side of the TA-55-4 basement. This storage area is irregularly shaped (512.98 $ft.^2$) with walls and ceilings that consist of chain link fencing. The dimensions are shown in Figure 3-9. The maximum storage capacity of this unit is 5,225 gallons or the equivalent of 95 drums (55-gallon). The types of waste containers holding hazardous or mixed waste that will be stored in Room G12 include 30-, 55- and 85-gallon drums and SWBs.

These waste containers will be stored in the configuration shown in Figure 3-10. The permitted boundary will be demarcated in accordance with Permit Section 3.5(2). No containers with free liquids will be stored in this unit, so secondary containment will not be necessary.

3.1.4 STORAGE ACTIVITIES

Waste containers will be stored in the designated permitted area of TA-55-0355 Pad. Raised pallets or wheeled drum dollies will be used to elevate 55 gallon drums off the floor. The drums on pallets as well as the SWBs may be stacked two (2) high. Not more than 84,370 gallons or the equivalent of 1,534 drums (55-gallon) of waste will be stored in the unit at any one time. In Room B13, drums will be placed on pallets or wheeled drum dollies and may be stacked two (2) high. No more than 4,950 gallons or the equivalent of 90 drums (55-gallon) will be stored in the unit at any one time. In Room G12, drums will be placed on pallets or wheeled drum dollies and may be stacked two (2) high. No more than 5,225 gallons or the equivalent of 95 drums (55-gallon) will be stored in the unit at any one time. SWBs are not anticipated to be stacked in rooms B13 and G12. No containers with free liquids will be stored at the three storage units. These storage units will increase the storage capacity at TA-55 by approximately 2%. Forklifts or hand trucks will be used to move the waste.

All storage activities will be managed according to all applicable requirements contained in the Permit, including Part 1 – *General Permit Conditions*; Part 2 – *General Facility Conditions*; Part 3 – *Storage in Containers*; Attachment C – *Waste Analysis Plan*; Attachment D – *Contingency Plan*; Attachment E – *Inspection Plan*; and Attachment F – *Personnel Training Plan*.

3.2 AUTHORIZED WASTES AND WASTE ACCEPTANCE

The TA-55-0355 Pad, rooms B13 and G12 will store hazardous wastes identified by one or more of the EPA Hazardous Waste Numbers presented in LANL General Part A Permit Application, Amendment 19, that are currently associated with wastes in storage at TA-55 and included in the LANL Permit, Attachment B, *Part A Application.*

3.3 PREPAREDNESS AND PREVENTION

The following sections present how operations at the TA-55-0355 Pad, rooms B13 and G12 will comply with the preparedness and prevention requirements of 40 CFR Part 264, Subpart C. Health and safety procedures followed by site personnel during routine operations are described in Section 3.4 *Hazards Prevention*. New equipment will be added to all three storage units.

3.3.1 REQUIRED EQUIPMENT

Decontamination equipment is available at the TA-55-0355 Pad, rooms B13 and G12. This equipment includes a spill control station and a portable eyewash station. No safety showers are required since no free liquids will be stored at these units. Additional decontamination

equipment may be provided by LANL's Security and Emergency Operations (SEO) Emergency Response (ER) personnel.

3.4 HAZARDS PREVENTION

A description of the preventive procedures, structures, and equipment at the TA-55-0355 Pad, rooms B13 and G12 is presented below. This information is provided in accordance with the requirements of 20.4.1 NMAC, Subpart V, Part 264, Subpart C, and 20.4.1 NMAC §270.14(b)(8) [6-14-00].

3.4.1 PREVENTING HAZARDS UNLOADING

Flatbed trucks, trailers, forklifts, or other appropriate vehicles may be used to transport waste containers to and from the waste management units at TA-55. Forklift operators may use a boom, if necessary, to improve handling capabilities. Small containers may be handled manually or with a dolly. Operators are required to use handling equipment appropriate to a container's size and weight to mitigate hazards while moving containers.

3.4.2 PREVENTING RUN-ON/RUN-OFF

Runoff from TA-55-0355 Pad to other areas of the facility or to the environment is and will be prevented. No free liquids will be stored at the TA-55-0355 Pad. The TA-55-0355 Pad waste storage unit includes the area underneath the canopy and the north and south areas bordering the canopy, which significantly reduces precipitation run-on. Runoff control of liquids resulting from fire-suppression activities will be accomplished by using a vacuum truck, a portable pump, a high-efficiency particulate air (HEPA) vacuum, and/or sorbents, depending on the volume and location of accumulated liquid.

The TA-55-0355 Pad has a slope of 1/8 in. per ft., sloping from north to south. The concrete apron around the pad gently slopes away from the concrete that is under the pad's canopy. Site drainage allows rain water to flow away from the pad (Figure 3-2). Pursuant to the requirements of 20.4.1 NMAC §270.14(b)(19)(xi) [6-14-00], contours and surface drainage around the TA-55-0355 Pad are shown in Figure 3-12 of this document. These features will prevent run-on to the TA-55-0355 Pad.

Given that rooms B13 and G12 are within TA-55-4, run-on/run-off prevention is not applicable.

3.4.3 MITIGATING EFFECTS OF POWER OUTAGES

Electrical power is supplied to operate the public address (PA) system, various instruments, and other electrical equipment at the TA-55-0355 Pad and TA-55-4, including rooms B13 and G12. In the event of a power failure, portable generators are available from the Facility and Waste Operations Division support office and at building TA-55-3. Evacuation alarms located throughout TA-55 are equipped with a battery backup and will continue to operate for eight hours during a power failure. Waste management operations would be discontinued

temporarily if electrical power was not restored quickly or if container-handling equipment failed. Neither a power nor an equipment failure would affect containment at the TA-55-0355 Pad.

3.4.4 PREVENTING RELEASES TO THE ATMOSPHERE

Releases to the atmosphere are not anticipated from the waste stored on the TA-55-0355 Pad or rooms B13 and G12. All waste containers meet DOT Class A shipping container standards and will be fully inspected before placement at the units. All containers will be kept closed during handling and storage. No waste repackaging is allowed at any of the permitted units. During storage, waste containers will be inspected in accordance with Attachment E Inspection Plan requirements. In the event of an unexpected release, all personnel working within or near the area would be notified immediately to evacuate.

3.5 CONTINGENCY PLAN

In accordance with 40 CFR Part 264, Subpart D and 40 CFR § 270.14(b)(7), emergency measures applicable to the TA-55-0355 Pad, rooms B13 and G12 will be included in Permit Attachment D, *Contingency Plan* (proposed language is shown in redline text in Attachment C of this permit modification request). A copy of the Contingency Plan in Attachment D of the Permit will be maintained at each of the units. Proposed contingency plan language for the TA-55-0355 Pad is presented in Section 3.5.1 of this permit modification request. Rooms B13 and G12 will be added to the existing *Permit Attachment D, Table D-2, TA-55 Building 4 Basement Contingency Plan* (Attachment C of this permit application).

An evacuation route and assembly/muster area that may be used at the units in the event of an emergency is updated and accessible at all times. The evacuation route, assembly/muster area location, and emergency equipment are subject to change.

3.5.1 EMERGENCY EQUIPMENT AT THE TA-55-0355 PAD

The following sections list the equipment located at the TA-55-0355 Pad in case of an emergency.

3.5.1.1 Fire Control Equipment

Four ABC rated fire extinguishers are located at the TA-55-0355 Pad. An ABC rated fire extinguisher is located in each vehicle used to transport waste containers to the unit.

Description of General Capabilities:

Portable and manually operated fire extinguishers may be used by any qualified employee in the event of a small fire. For larger fires, the Los Alamos Fire Department (LAFD) is alerted and requested to respond.

3.5.1.2 Communication Equipment

A telephone is located on the north side of the TA-55-0355 Pad and within the High Energy Neutron Counter (HENC) unit. The facilities public address (PA) system can be heard from the TA-55-0355 Pad.

Description of General Capabilities:

A telephone for internal and external communication is available for use by any employee. Employees can be notified of an emergency situation and appropriate response action through the PA system.

No fire alarm pull station is located at the TA-55-0355 Pad. The nearest fire alarm pull box is located outside of TA-55-4 on the south dock. In case of a fire, notification will be made via the telephone.

Description of General Capabilities:

Manually-operated fire alarms may be activated by any employee in the event of a fire to alert site personnel, LANL Emergency Response Personnel, and the LAFD.

Fire and public address system alarms are located throughout the facility.

Description of General Capabilities:

The fire and public address system are activated or used to provide a sound signal to alert personnel of fires or the need to clear the area.

3.5.1.3 Decontamination Equipment

An eyewash station and any applicable Safety Data Sheets (SDSs) are available at the TA-55-0355 Pad or at the Operation Support Building. SDS information is maintained where appropriate for personnel accessibility and is used for chemicals that will be needed to support operations or emergency activities.

Description of General Capabilities:

The eyewash may be used by personnel who receive a chemical splash to the eyes. Specific SDSs should be reviewed prior to working with chemicals. No free liquids will be stored on the pad.

3.5.1.4 Personal Protective Equipment

Personnel at the TA-55-0355 Pad will be required to use appropriate PPE to protect themselves from hazards found under normal conditions. This PPE may include gloves, steel toe shoes, and

eye protection. Additional PPE may be required during unusual hazardous situations. First aid kits and hearing protection will also be available.

Description of General Capabilities:

To prevent undue exposure of personnel to hazardous or mixed waste, PPE appropriate for the waste containers being managed will be worn by all on-site personnel at the TA-55-0355 Pad. First aid kits are available and may be used by personnel who sustain minor injuries at the unit in the course of operations. Hearing protection may be used by operations personnel to mitigate noise impacts.

3.5.1.5 Other

If transportation is needed for evacuation, vehicles may be obtained through the Emergency Management and Response Group.

3.6 FACILITY REQUIREMENTS

This section of the TA-55 Permit modification request addresses facility information requirements including location information (i.e., seismic standard), provides a listing and location for required topographic maps, and an evaluation of other federal laws. Floodplain standards are addressed in the 2003 TA-55, Part B Application (LANL, 2003)

3.6.1 SEISMIC STANDARD

The proposed TA-55-0355 Pad and rooms B13 and G12 are in compliance with the seismic location standards of 40 CFR §270.14(b)(11) and 264.18(a). These regulations require seismic studies for new facilities to demonstrate that evidence of Holocene faulting is not found within 200 feet of the waste management unit. The seismic investigation included in Attachment B, *Seismic Report*, of this permit modification request demonstrates that there has been no direct evidence observed for Holocene faulting within the radius of the Pad. While the report included as Attachment B contains discussion for both TA-55-0355 and TA-55-4, compliance with the seismic location standards for TA-55-4 basement were demonstrated as part of the application process and permitting of the other units within the building.

3.6.2 FLOODPLAIN STANDARD

TA-55-0355 and TA-55-4 (including rooms B13 and G12) are located on a mesa top. In accordance with 40 CFR §§ 270.14(b)(11)(iii through v), TA-55-0355 and TA-55-4 are not located within the 100-year floodplain boundary.

In accordance with the requirements of 40 CFR §270.14(b)(19)(ii), LANL has mapped all 100 year floodplain boundaries with the Facility, as required in Module VIII: Special Conditions Pursuant to the 1984 Hazardous and Solid Waste Amendments to RCRA for Los Alamos National

Laboratory. A report was published documenting the floodplain mapping procedures (McLin et. al., 1992). These maps were revised after the Cerro Grande Fire and a new report was generated (McLin et. al., 2001). Figure 3-12 of this permit modification request shows that the TA-55 units are not within the 100-year floodplain.

3.6.3 ARCHEOLOGICAL SITES

There are two archeological sites located near TA-55. The two sites are located northeast and southeast of TA-55-4. These sites are protected under the National Historical Preservation Act. TA-55-0355 and TA-55-4 (including rooms B13 and G12) are not within the footprint of the two archeological sites.

3.6.4 TOPOGRAPHIC MAPS

Topographic maps and figures are provided in this permit modification request or referenced to meet the requirements of 40 CFR § 270.14(b)(19). The maps clearly show the map scale, the date of preparation, and a north arrow. The maps and figures used to fulfill the regulatory requirements in this submittal include the following:

- A 100-year floodplain map showing the location of the TA-55 units is included in the 2003 TA-55, Part B Application (Attachment A) (LANL, 2003). Figure 3-12 of this permit modification request includes the floodplain locations following the Cerro Grande Fire.
- Maps showing surface waters, including intermittent streams, near the TA-55 units are located in the LANL General Part A Permit Application, Revision 7.0 (LANL, 2013).
- Surrounding land uses (e.g., residential, recreational) are included in Permit Attachment N, Figures 1, 2, & 3 and 2013 General Permit Application, Revision 7.0 (LANL, 2013).
- Wind roses for TA-55, the location of the closest wind observation towers to TA-55 at LANL, are shown in the 2003 TA-55 Part B, Attachment A, Figures A-6 and A-7 (LANL 2003).
- Maps showing the legal boundaries of LANL are located in Attachment N, Figures 1 through 3 of the Permit, 2003 TA-55 Part B, Attachment A-8 (LANL, 2003) and the 2013 General Permit Application, Revision 7.0 (LANL 2013).
- The access control features are located in the 2003 TA-55 Part B, Attachment A-8 (LANL, 2003), Permit Attachment N, Figure 10 (LANL, 2010).
- Maps showing supply wells, monitoring wells, test wells, springs, and surface-water sampling stations are included as Figure 3-11 of this permit application.
- The locations of buildings and structures, the hazardous waste management units, and the terrain topography are included as Figure 3-1 of this permit application.
- A map showing NPDES discharge structure locations is included as Map 2 in the LANL General Part A Permit Application, Revision 7.0 (LANL 2013).

- Drainage control features located near the permitted sites are shown on Figure 3-12 of this permit modification request.
- Natural surface drainages at the TA-55 are shown on the topographic map included as Figure 3-12 of this permit modification request.
- Fire stations serving LANL and the County of Los Alamos are shown on Figure 49 of Permit Attachment N.

3.6.5 OTHER FEDERAL LAWS

The following federal laws are required under 40 CFR §§ 270.3 and 270.14(b)(20), to be given consideration when applying for a hazardous waste facility permit. When any of these laws are applicable, their procedures must be followed.

The Wild and Scenic Rivers Act (16 United States Code [USC] 1273 et seq.) provides for a national wild and scenic rivers system and prohibits construction of any waterway that would have a direct adverse effect on the values for which a wild and scenic river was established.

The National Historic Preservation Act of 1966 (16 USC 470 et seq.) establishes a program for the preservation of historic properties throughout the country. The act has provisions that require mitigation of adverse effects to registered properties.

The Endangered Species Act of 1973 (16 USC 1531) provides for the conservation of endangered and threatened species of fish, wildlife, and plants. The act prohibits any action that would jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat.

The Coastal Zone Management Act of 1972 (16 USC 1451 et seq.) establishes national policy for the management, use, protection, and development of land and water resources of the nation's coastal zones. Section 307(c) of the act and implementing regulations prohibit the U.S. EPA from issuing a permit for activity affecting coastal zone land or water without the certification from the applicant that the activity is in compliance with the state Coastal Zone Management Program.

The Fish and Wildlife Coordination Act of 1934, as amended (16 USC 661 et seq.) promotes the conservation of wildlife, fish, and game and integrates this conservation with water resource projects. Certain provisions of the act require that permits proposing or authorizing the impoundment, diversion, or other control or modification of any body of water be considered by the appropriate state agency for impacts to wildlife resources.

Consideration was given to the National Historic Preservation Act, the Endangered Species Act, and the Fish and Wildlife Coordination Act because of ongoing programs at LANL.

The National Historic Preservation Act is administered by the Advisory Council on Historic Preservation, appointed by the President, and the New Mexico State Historic Preservation Office. Section 106 of the Act requires DOE to consider the effects of its actions on historic properties, and provide the Council with a reasonable opportunity to comment on those actions and the manner in which DOE takes historic properties into account in their decisions. DOE accomplishes this through consultation with the State Historic Preservation Office whenever a project may potentially impact a historic property. LANL may prepare a Historic Building Survey Report assessing the eligibility of a historic building dating from the Manhattan Project and early Cold War periods (1943 to 1956) for the National Register of Historic Places and evaluating the impacts of the proposed actions. The consultation process was formalized in April 2000 through a Programmatic Agreement between DOE, the Advisory Council, and the State of New Mexico.

For any undertaking on DOE land that may directly or indirectly impact threatened and endangered (T&E) species or their habitat, DOE must consult with the U.S. Fish and Wildlife Service (USFWS), as provided under Section 7 of the Endangered Species Act. Similarly, DOE must consult with the USFWS for projects that would impound, divert, or otherwise control or modify a body of water, as required by the Fish and Wildlife Coordination Act.

For Endangered Species Act compliance, LANL may prepare a Biological Assessment to document the presence of T&E species and to evaluate the impacts of a project on a listed species or its habitat. DOE will then request in writing that the USFWS concur with the DOE's findings in the Biological Assessment. In recent years, DOE and LANL have streamlined the consultation process by preparing a T&E Species Habitat Management Plan. This plan fulfills the provisions of the Endangered Species Act that require federal agencies to carry out programs for the conservation of T&E species and their habitat. The USFWS approved this plan originally in February 1999 and the plan is updated as needed.

Provisions in the Wild and Scenic Rivers Act and the Coastal Zone Management Act are not applicable to LANL's activities.

Consideration will be given to Executive Orders, issued by the President, that are relevant to waste management activities at LANL. When any of these Orders are applicable, its provisions will be followed. Requirements for Executive Orders are reserved in 40 CFR § 270.3(f).

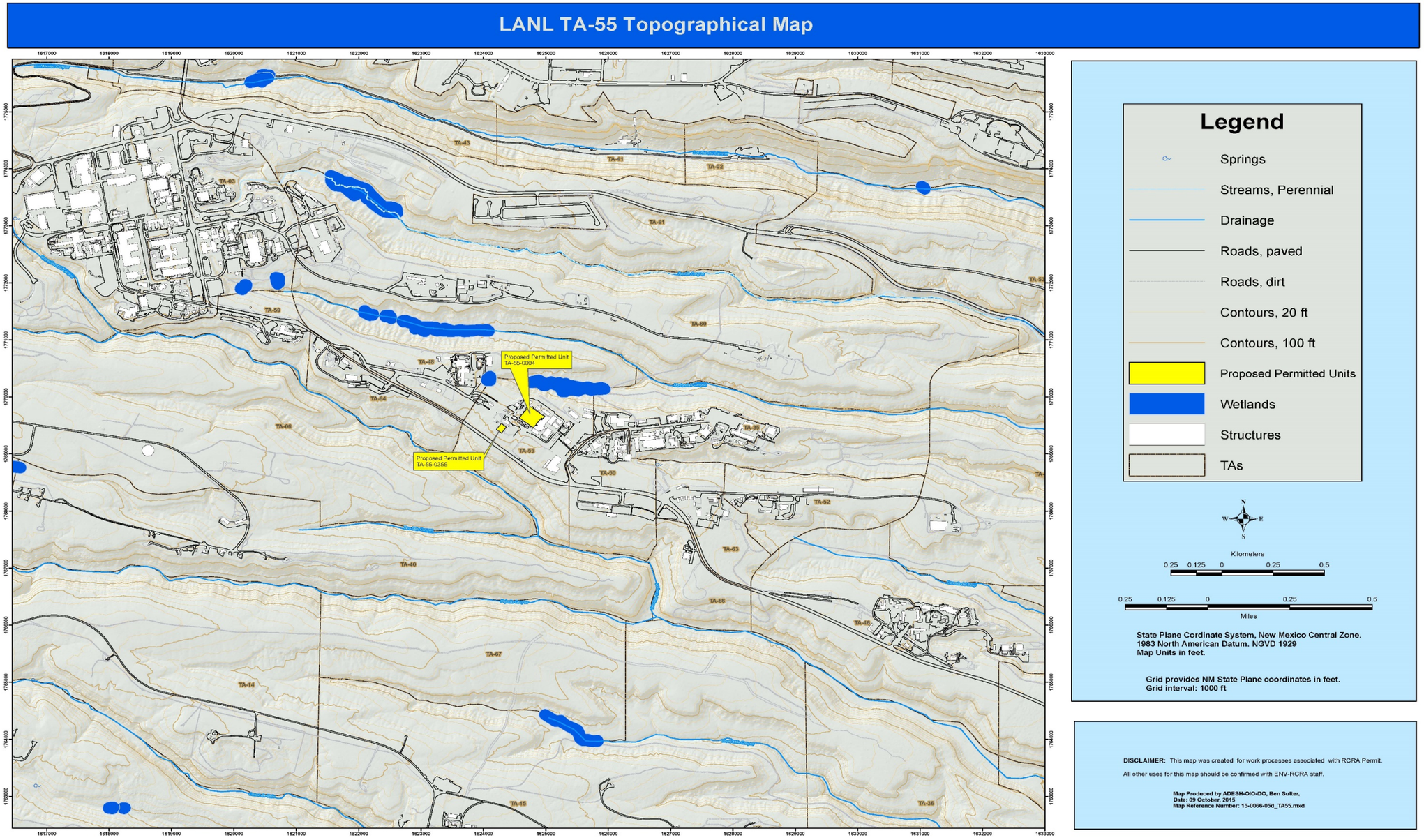


Figure 3-1. TA-55 Hazardous Waste Management Units (TA-55-0355 (HENC) Pad, Rooms G12 and B13)

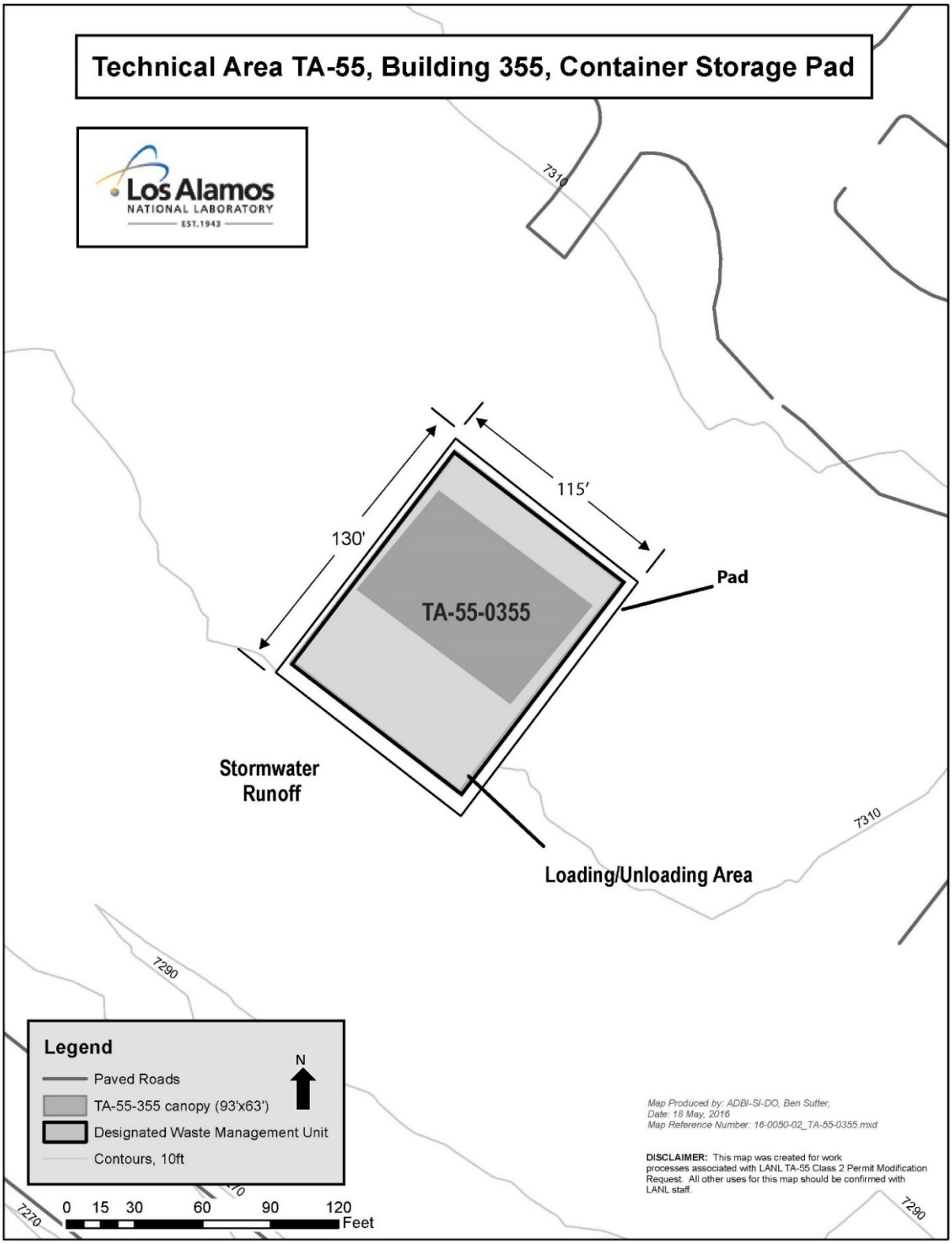


Figure 3-2 TA-55-0355 Plan View

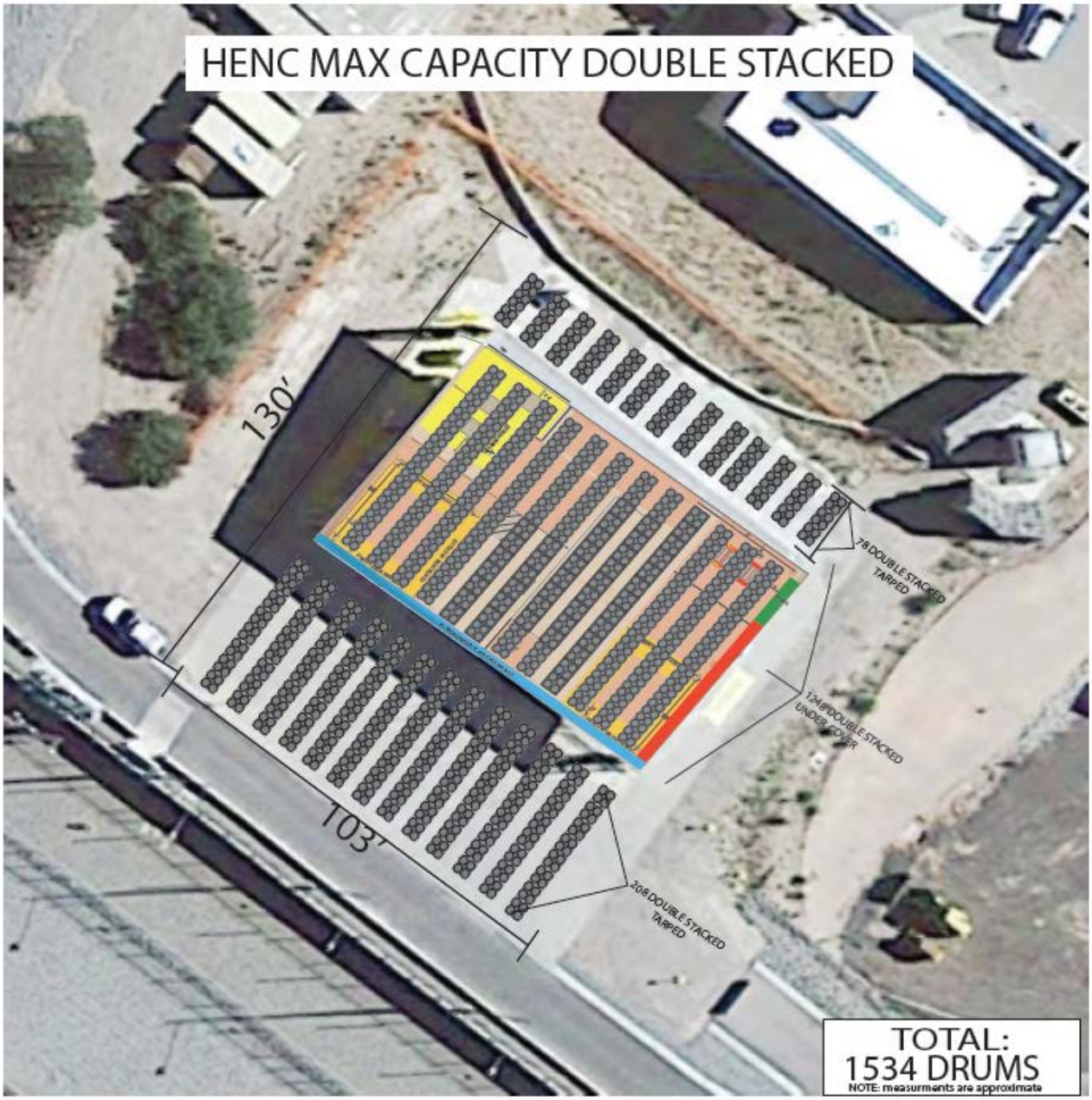


Figure 3-3. TA-55-0355 Container Storage Configuration

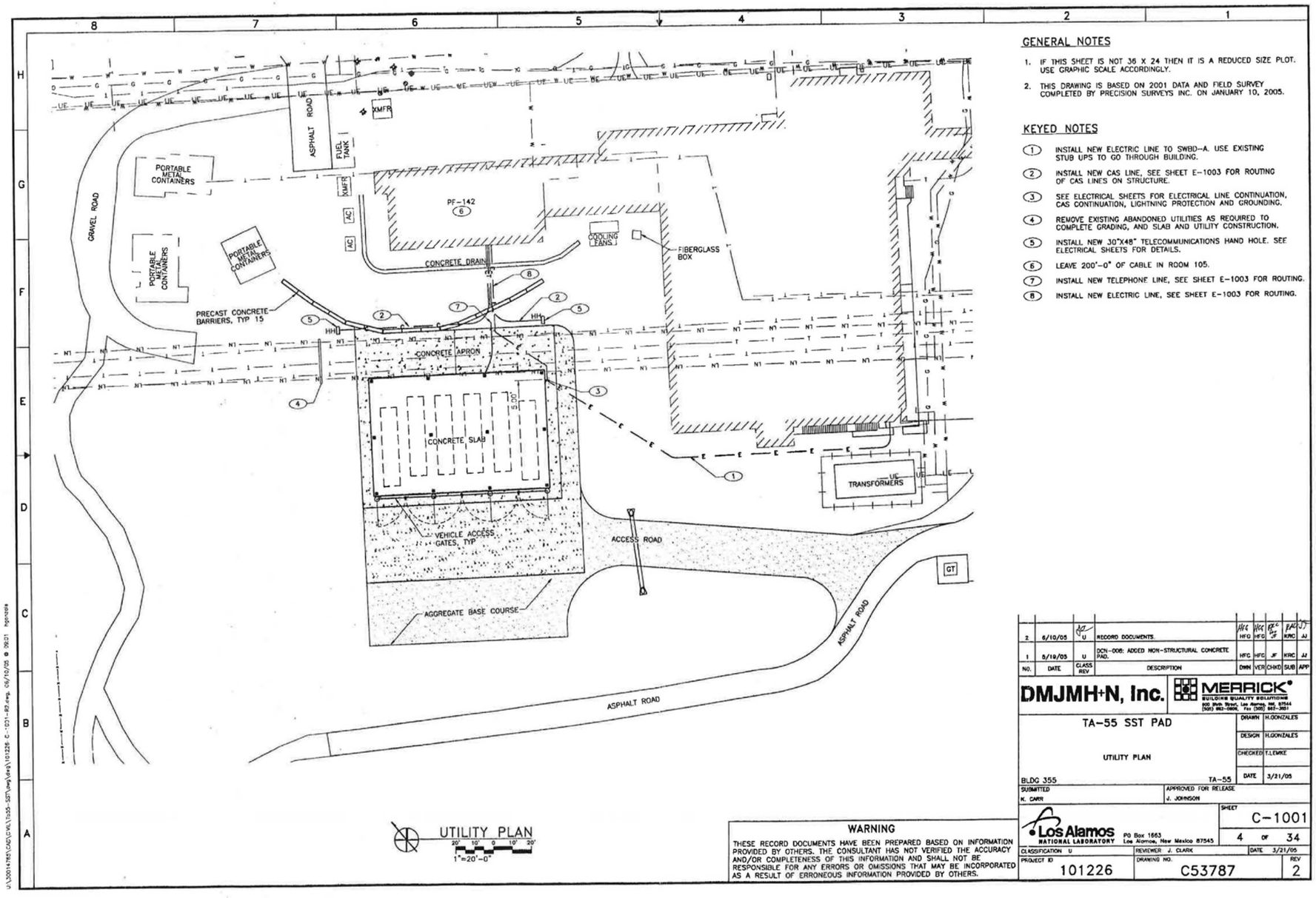


Figure 3-4. TA-55-0355 Design Drawing (Concrete Slab Plan View)

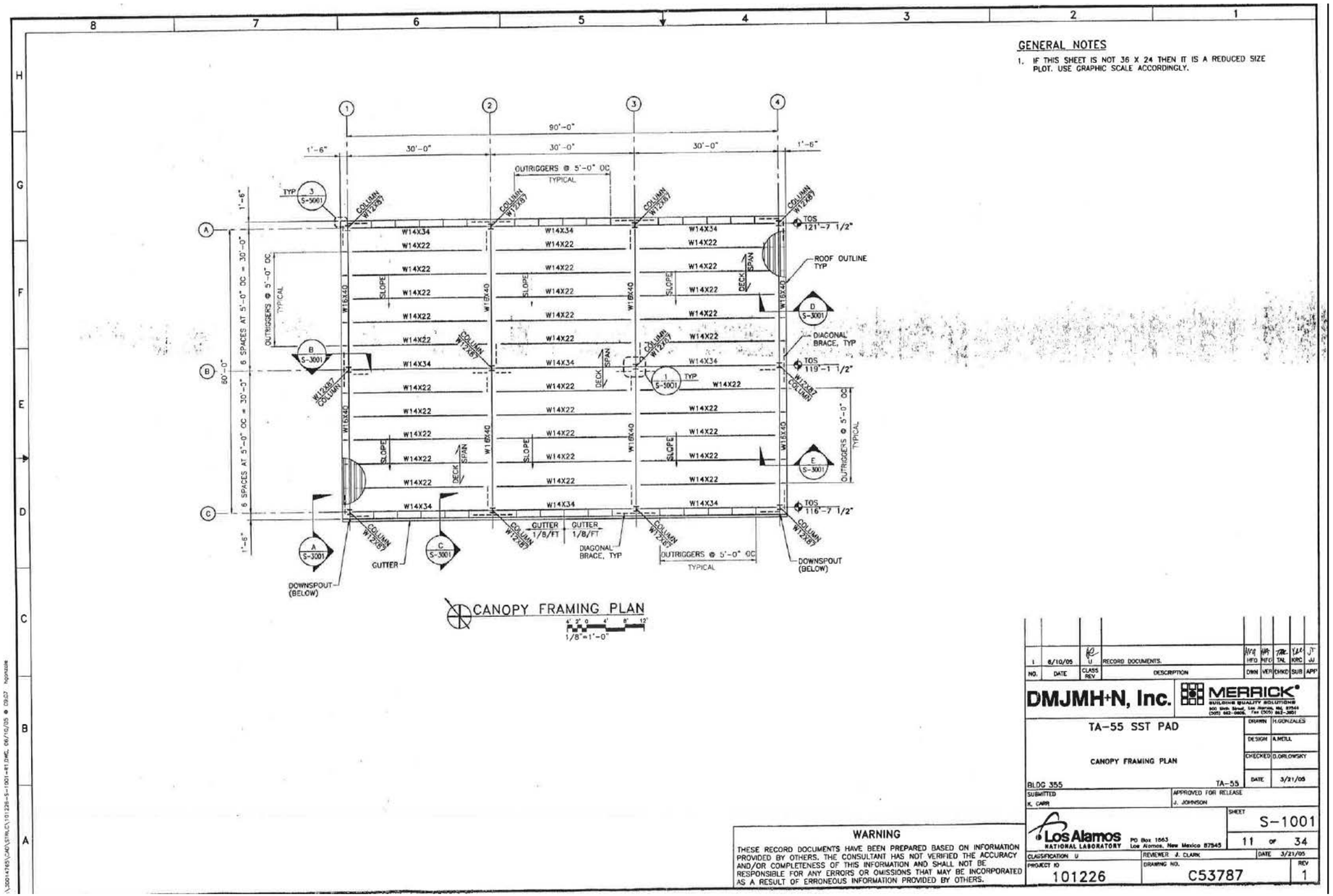


Figure 3-5. TA-55-0355 Design Drawing (Canopy Framing Plan)

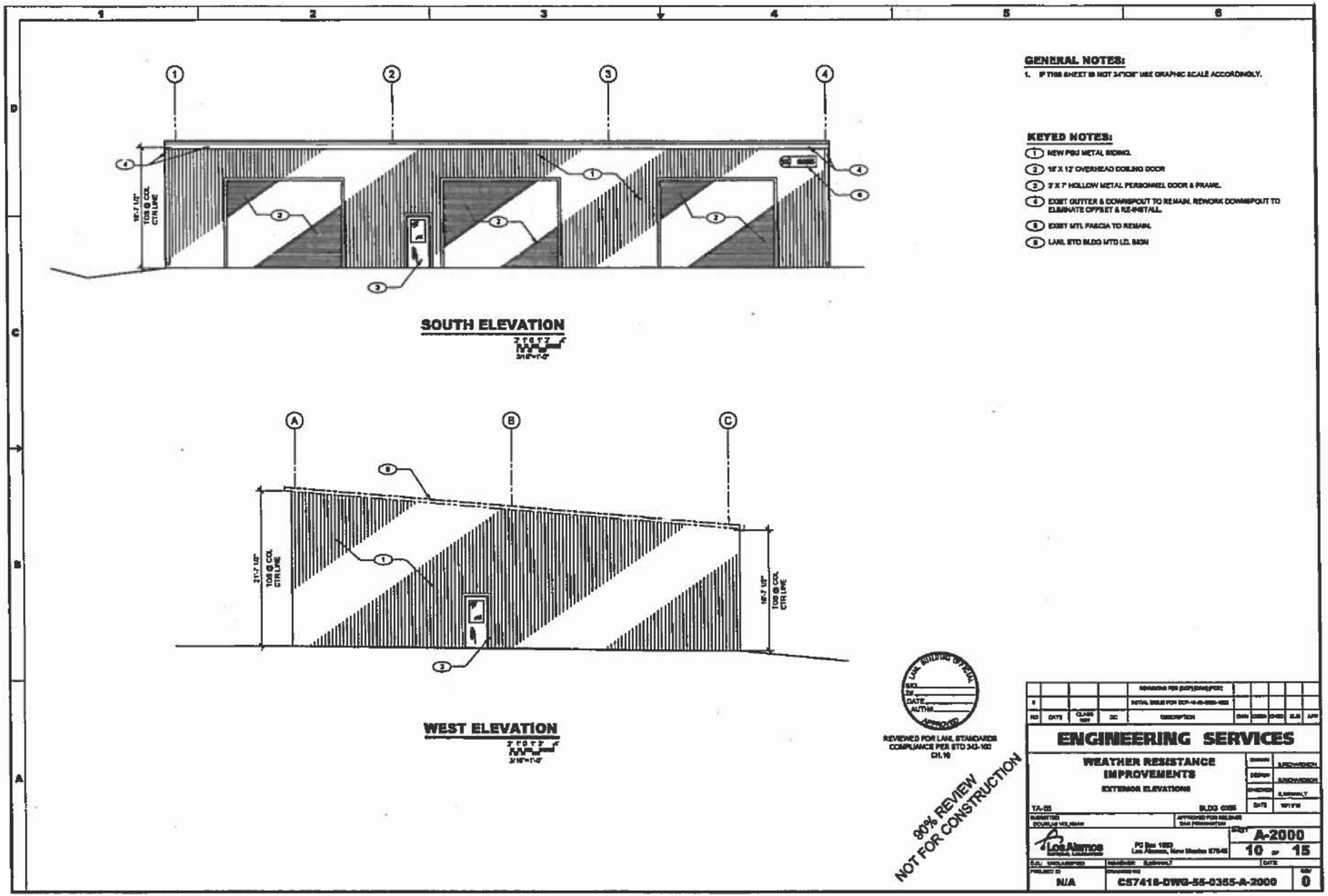


Figure 3-6. TA-55-0355 Design Drawing (Wind Walls)

Figure 3-7. Room B13 Floor Plan

[Placeholder page for information provided under separate cover]

Figure 3-8. Room B13 Container Storage Configuration

[Placeholder page for information provided under separate cover]

Figure 3-9. Room G12 Floor Plan

[Placeholder page for information provided under separate cover]

Figure 3-10. Room G12 Container Storage Configuration

[Placeholder page for information provided under separate cover]

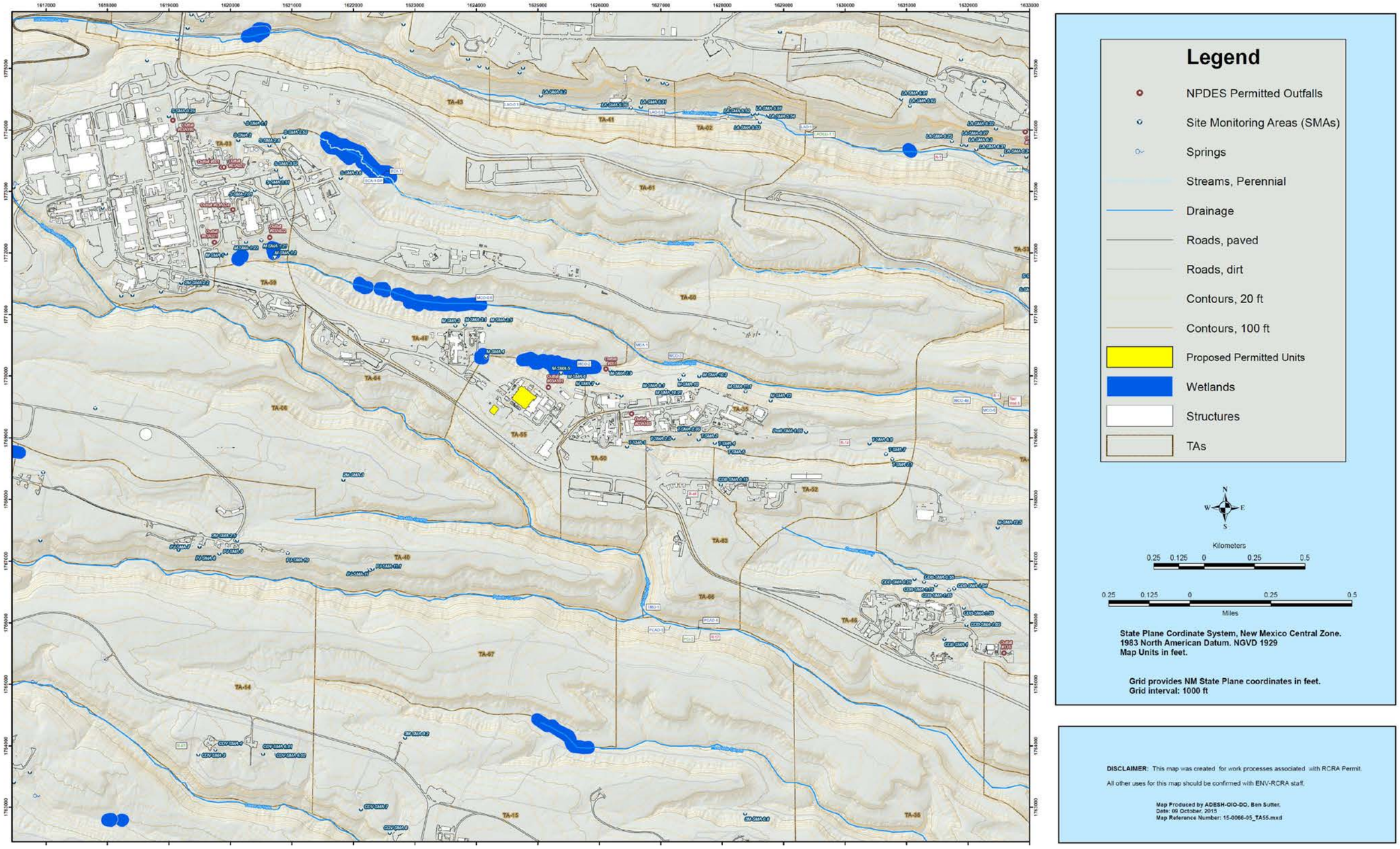
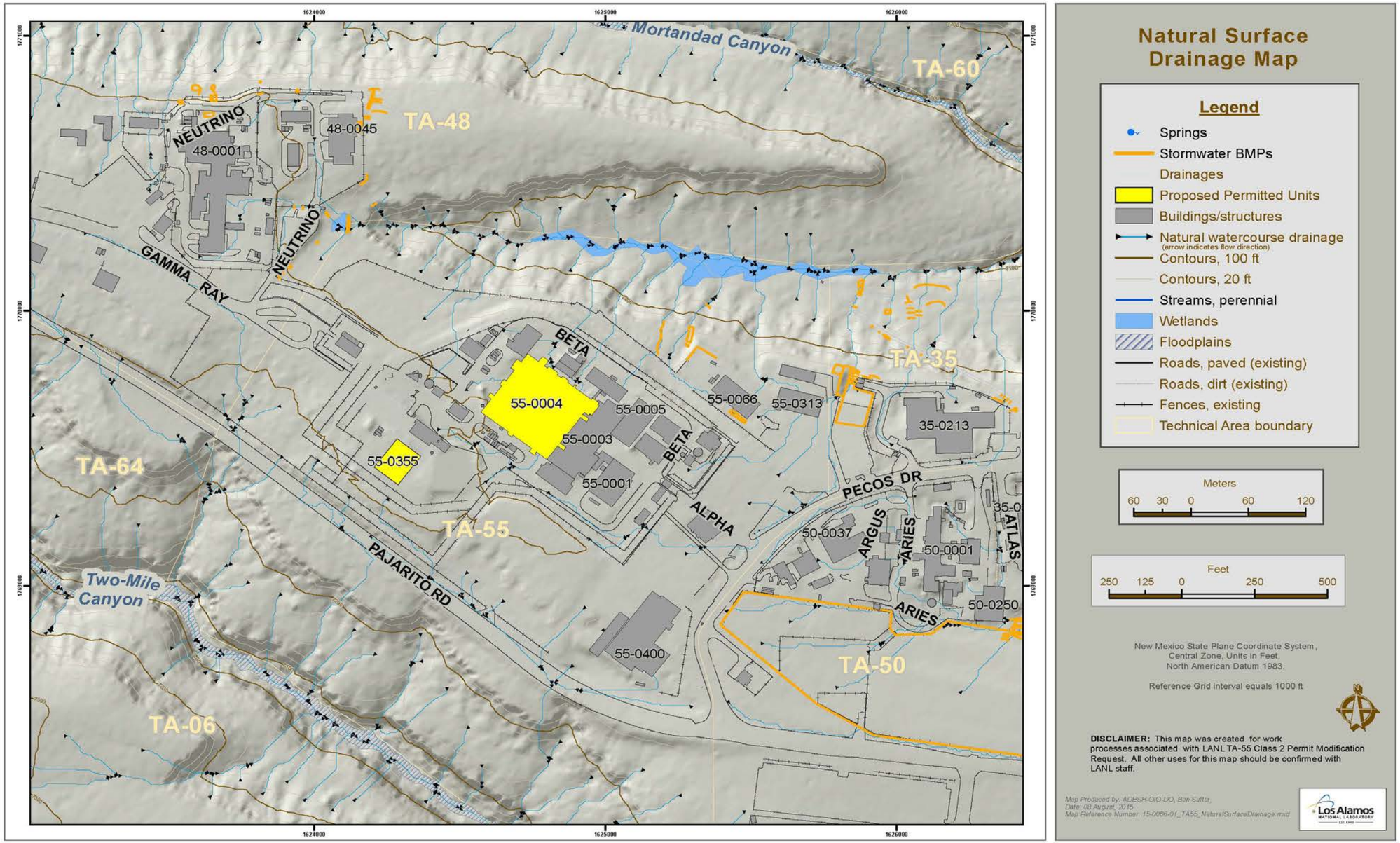


Figure 3-11. Wells



Natural Surface Drainage Map

Legend

- Springs
- Stormwater BMPs
- Drainages
- Proposed Permitted Units
- Buildings/structures
- Natural watercourse drainage (arrow indicates flow direction)
- Contours, 100 ft
- Contours, 20 ft
- Streams, perennial
- Wetlands
- Floodplains
- Roads, paved (existing)
- Roads, dirt (existing)
- Fences, existing
- Technical Area boundary

Meters
60 30 0 60 120

Feet
250 125 0 250 500

New Mexico State Plane Coordinate System,
Central Zone, Units in Feet.
North American Datum 1983.

Reference Grid interval equals 1000 ft

DISCLAIMER: This map was created for work processes associated with LANL TA-55 Class 2 Permit Modification Request. All other uses for this map should be confirmed with LANL staff.

Map Produced by: ADESH-OKO-DO, Ben Suttle,
Date: 08 August, 2015
Map Reference Number: 15-0066-01_TA55_NaturalSurfaceDrainage.mxd

Los Alamos NATIONAL LABORATORY EST. 1943

Figure 3-12. Drainage Barriers and Flood Control

SECTION 4

4.0 CLOSURE PLAN

The closure plans describe the activities necessary to close the TA-55 Units. The information provided in the closure plans address the closure requirements specified in Permit Part 9, 40 CFR Part 264, Subpart G for hazardous waste management units operated at LANL under RCRA and the NMHWA.

The proposed closure plans for the TA-55 Units are included as Attachment D of this permit modification request and include references to the requirements of Permit Part 9, *Closure*, and information regarding the procedures to meet them. The closure plans closely follow the format and content of the current closure plans included in Attachment G of the Permit. The closure plan includes descriptions of the closure performance standards, schedules, closure procedures (including waste equipment disposition, structure removal, decontamination and verification procedures), the sampling and analysis plan, waste management, and the closure certification report.

Until closure is complete and has been certified in accordance with Permit Section 9.5, *Closure Certification Report*, a copy of the approved closure plan or the 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 LANL and at the DOE National Nuclear Security Administration Los Alamos Field Office (NA-LA). Prior to closure of the TA-55 units, the closure plans 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 will be submitted to the NMED for approval prior to implementing closure activities.

4.1 CLOSURE COST ESTIMATE, FINANCIAL ASSURANCE, AND LIABILITY REQUIREMENTS

LANL is a federal facility, owned by the DOE. In accordance with 40 CFR §264.140(c), LANL is exempt from the 40 CFR §264 Subpart H requirements to provide a cost estimate, financial assurance mechanisms, and liability insurance for closure actions. Therefore, these provisions are not included in the closure plan included as Attachment F of this permit modification request.

SECTION 5

5.0 REFERENCES

LANL, 2003. Los Alamos National Laboratory General Part A Permit Application, Revision 6.0, Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 2003. Resource Conservation and Recovery Act (RCRA) Technical Area 55 (TA-55) Part B Permit Application Submittal, Revision 2.0, Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 2013. General Part A Permit Application (Revision 7.0) for the Los Alamos National Laboratory, New Mexico, Los Alamos National Laboratory, Los Alamos, New Mexico.

McLin, S.G., M.E. van Eeckhout, and A. Earles. 2001. *Mapping 100-Year Floodplain Boundaries Following the Cerro Grande Wildfire*. LA-UR-01-5218, Los Alamos National Laboratory, Los Alamos, New Mexico.

McLin, S.G. 1992. *Determination of 100-Year Floodplain Elevations at Los Alamos National Laboratory.* LA-12195-MS, Los Alamos National Laboratory, Los Alamos, New Mexico.

NMED 2010. Los Alamos National Laboratory Hazardous Waste Facility Permit, New Mexico Environment Department, Santa Fe, New Mexico (as amended).

SECTION 6

6.0 CERTIFICATIONS

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.

1-24-17

John C. Bretzke, EPC Division Leader
Environmental Protection and Compliance Division
Los Alamos National Security, LLC
Operator

Date Signed

1-25-17

Karen E. Armijo, Environmental Permitting & Compliance Program Manager
National Nuclear Security Administration
Los Alamos Field Office
U.S. Department of Energy
Owner/Operator

Date Signed

ATTACHMENT A

PART A FORM

OMB# 2050-0024; Expires 01/31/2017

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 # 19.0)
- ☐ 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 0	**C.**	0 5 6 2 2 1
B.	0 5 4 1 7 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: Kimberly | **MI:** | **Last:** Davis Lebak

Title: Manager, Los Alamos Field Office, Department of Energy, National Nuclear Security Administration

Street or P.O. Box: 3747 West Jemez Road, MS A316

City, Town or Village: Los Alamos

State: New Mexico | **Country:** USA | **Zip Code:** 87544

Email: kimdavis.lebak@nnsa.doe.gov

Phone: (505) 667-5105 | **Ext.:** | **Fax:**

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, MS A316

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 2-10.

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						

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)
[signature]	John C. Bretzke, EPC-DO	1/25/17
	Operator, LANS	
[signature]	Kimberly Davis Lebak, Manager	1/30/17
	Owner, Los Alamos Field Office, NNSA	

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						

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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 OMB#: 2050-0024; Expires 01/31/2017

United States Environmental Protection Agency

HAZARDOUS WASTE PERMIT INFORMATION FORM

1. Facility Permit Contact	**First Name:** Kimberly	**MI:**	**Last Name:** Davis Lebak
	Contact Title: Manager, Los Alamos Field Office, NNSA		
	Phone Number: 505-667-5105	**Ext.:**	**Email:** kimdavis.lebak@nnsa.doe.gov
2. Facility Permit Contact Mailing Address	**Street or P. O. Box:** 3747 West Jemez Road, MS A316		
	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, MS K499		
	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:		
N	NMR12A---	NPDES Construction General Permit coverage for various individual construction projects: NMR120000
Industrial Point Source Permit:		
N	NM0028355	NPDES Industrial Point Source Discharge
NPDES Storm Water Multi-Sector General Permit (MSGP) for Industrial Activities		
N	NMR053195	NPDES MSGP
NPDES Storm Water Individual Permit		
N	NM0003075	NPDES LANL Storm Water Individual Permit
NPDES Pesticides General Permit		
N	NMG878A041	NPDES Pesticides General Permit (PGP) for discharges from te application of pesticides
Resource Conservation and Recovery Act (RCRA):		
R	NM0890010515	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	Eight (8) Domestic Septic Tank/Leachfield Systems, Discharge Permit Application, June 2010 Permit issued July 2015.
E	DP-1793	On-Site Treatment and Land Application of Groundwater, Discharge Permit Application, December 2011 Permit issued July 2015.
E	DP-1835	Injection of Treated Ground Water into the Regional Aquifer Through Six (6) Class V Underground Injection Control (UIC) Wells. Application Date: April 2015. Permit issued August 2016.
Clean Water Act Section 404 Dredge and Fill Permits with U.S. Army Corps of Engineers		
E	NWP-43	Water Canyon West Jemez road Storm Drain Controls. Project complete but subject to special monitoring conditions- 5 year monitoring.
E	NWP-38	Sandia Canyon TA-72 Stormwater Controls. Project not yet complete and subject to 5 years of monitoring.
E	NWP-38	Sandia Canyon Wetland (Grade Control Structure). Project complete but subject to special monitoring conditions- 5 year monitoring.
E	NWP-43	Pueblo Grade Control Spurs and E060.1 Gage Revitalization.
E	NWP-018	Section 404 Nationwide Permit 18 – Minor Discharges for various individually approved construction projects including NM Certification (2012)
E	NWP-33	Section 404 Nationwide Permit 33 – Temporary Construction, Access and Dewatering for various individually approved construction projects including NM Certification (2012)
E	NWP-38	Section 404 Nationwide Permit 38 – Cleanup of

														Hazardous and Toxic Waste for various individually approved construction projects including NM Certification (2012)
ir Quality Permits:														
Air Quality Operating Permit (20.2.70 NMAC)														
E	P	1	0	0	-	R	1	-	M	3				LANL Air Emissions Operating Permit
Air Quality (20.2.72 NMAC)														
E	2	1	9	5	-	R	5	9						Various Exemptions
E	2	1	9	5	B	-	M	2						TA-3 Power Plant
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	-	R	1						Data disintegrator
E	2	1	9	5	N	-	R	2						Chemistry and Metallurgy Research Replacement Facility
E	2	1	9	5	P	-	R	1						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	-	R	1								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	X
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		C. Process Total Number of Units	For Official Use Only					
					(1) Amount (Specify)	(2) Unit of Measure							
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		C. Process Total Number of Units	For Official Use Only					
					(1) Amount (Specify)	(2) Unit of Measure							
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 at 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	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 16			
	1	X	0	1	1,000 50/1,000	See Lines 2 & 3	002	
	2				Pounds per burn Gallons per burn/pounds per burn			
	3				Unit identified as TA-16-399 Burn Tray 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	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	2,000	See Lines 2 and 3	002	
	2				1,000 pounds per detonation at each unit			
	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	
	1	T	0	4	275	See lines 2 & 3	001	
					Gallons per day			
					located inside a container storage unit listed above			

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	See Line 2	002	
	2				Capacity is in Gallons. 13,410 gallons of the total capacity is only available for excess storage capacity at the TA-54-38 West Outdoor Pad.			
	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	272,145	G	009	
	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	

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 63			
	1	S	0	1	105,875	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	

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	3	500	P	S	0	1							
	8	2	U	1	0	8	1,000	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**																
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 50																	
	1	D	0	0	1	69,696	P	S	0	1	T	0	4				
	2	D	0	0	2	52,734	P	S	0	1	T	0	4				
	3	D	0	0	3	3,444	P	S	0	1							
	4	D	0	0	4	7,531	P	S	0	1	T	0	4				
	5	D	0	0	5	7,740	P	S	0	1	T	0	4				
	6	D	0	0	6	535, 451	P	S	0	1	T	0	4				
	7	D	0	0	7	567, 226	P	S	0	1	T	0	4				
	8	D	0	0	8	1,405,439	P	S	0	1	T	0	4				
	9	D	0	0	9	75,666	P	S	0	1	T	0	4				
1	**0**	D	0	1	0	8,922	P	S	0	1	T	0	4				
1	**1**	D	0	1	1	31,255	P	S	0	1	T	0	4				
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	T	0	4				
1	**9**	D	0	1	9	4,261	P	S	0	1	T	0	4				
2	**0**	D	0	2	0	100	P	S	0	1							
2	**1**	D	0	2	1	100	P	S	0	1	T	0	4				
2	**2**	D	0	2	2	100	P	S	0	1	T	0	4				
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	T	0	4				
2	**8**	D	0	2	8	216,783	P	S	0	1	T	0	4				
2	**9**	D	0	2	9	215,184	P	S	0	1	T	0	4				
3	**0**	D	0	3	0	5,491	P	S	0	1	T	0	4				
3	**1**	D	0	3	1	293	P	S	0	1							
3	**2**	D	0	3	2	3,135	P	S	0	1	T	0	4				
3	**3**	D	0	3	3	2,222	P	S	0	1	T	0	4				
3	**4**	D	0	3	4	1,228	P	S	0	1	T	0	4				
3	**5**	D	0	3	5	1,792	P	S	0	1	T	0	4				
3	**6**	D	0	3	6	549	P	S	0	1	T	0	4				
3	**7**	D	0	3	7	761	P	S	0	1	T	0	4				
3	**8**	D	0	3	8	1,549	P	S	0	1	T	0	4				
3	**9**	D	0	3	9	1,675	P	S	0	1	T	0	4				

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)																	
4	**0**	D	0	4	0	3,942	P	S	0	1	T	0	4				
4	**1**	D	0	4	1	293	P	S	0	1							
4	**2**	D	0	4	2	1,182	P	S	0	1	T	0	4				
4	**3**	D	0	4	3	655	P	S	0	1	T	0	4				
4	**4**	F	0	0	1	442,263	P	S	0	1	T	0	4				
4	**5**	F	0	0	2	147,347	P	S	0	1	T	0	4				
4	**6**	F	0	0	3	50,980	P	S	0	1	T	0	4				
4	**7**	F	0	0	4	2,817	P	S	0	1	T	0	4				
4	**8**	F	0	0	5	334,821	P	S	0	1	T	0	4				
4	**9**	F	0	0	6	100	P	S	0	1	T	0	4				
5	**0**	F	0	0	7	100	P	S	0	1	T	0	4				
5	**1**	F	0	0	8	100	P	S	0	1							
5	**2**	F	0	0	9	165	P	S	0	1	T	0	4				
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)					
118	P 0 4 4	100	P	S 0 1	
119	P 0 4 5	100	P	S 0 1	
120	P 0 4 6	100	P	S 0 1	
121	P 0 4 7	100	P	S 0 1	
122	P 0 4 8	143	P	S 0 1	
123	P 0 4 9	100	P	S 0 1	
124	P 0 5 0	100	P	S 0 1	
125	P 0 5 1	100	P	S 0 1	
126	P 0 5 4	100	P	S 0 1	
127	P 0 5 6	2,624	P	S 0 1	
128	P 0 5 7	100	P	S 0 1	
129	P 0 5 8	100	P	S 0 1	
130	P 0 5 9	100	P	S 0 1	
131	P 0 6 0	100	P	S 0 1	
132	P 0 6 2	100	P	S 0 1	
133	P 0 6 3	293	P	S 0 1	
134	P 0 6 4	100	P	S 0 1	
135	P 0 6 5	100	P	S 0 1	
136	P 0 6 6	100	P	S 0 1	
137	P 0 6 7	100	P	S 0 1	
138	P 0 6 8	293	P	S 0 1	
139	P 0 6 9	100	P	S 0 1	
140	P 0 7 0	100	P	S 0 1	
141	P 0 7 1	100	P	S 0 1	
142	P 0 7 2	100	P	S 0 1	
143	P 0 7 3	293	P	S 0 1	
144	P 0 7 4	100	P	S 0 1	
145	P 0 7 5	100	P	S 0 1	
146	P 0 7 6	403	P	S 0 1	
147	P 0 7 7	100	P	S 0 1	
148	P 0 7 8	425	P	S 0 1	
149	P 0 8 1	100	P	S 0 1	
150	P 0 8 2	100	P	S 0 1	
151	P 0 8 4	100	P	S 0 1	
152	P 0 8 5	100	P	S 0 1	
153	P 0 8 7	100	P	S 0 1	
154	P 0 8 8	100	P	S 0 1	
155	P 0 8 9	100	P	S 0 1	
156	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)					
157	P 0 9 3	100	P	S 0 1	
158	P 0 9 4	100	P	S 0 1	
159	P 0 9 5	293	P	S 0 1	
160	P 0 9 6	293	P	S 0 1	
161	P 0 9 7	100	P	S 0 1	
162	P 0 9 8	293	P	S 0 1	
163	P 0 9 9	100	P	S 0 1	
164	P 1 0 1	100	P	S 0 1	
165	P 1 0 2	100	P	S 0 1	
166	P 1 0 3	100	P	S 0 1	
167	P 1 0 4	143	P	S 0 1	
168	P 1 0 5	143	P	S 0 1	
169	P 1 0 6	293	P	S 0 1	
170	P 1 0 8	100	P	S 0 1	
171	P 1 0 9	100	P	S 0 1	
172	P 1 1 0	100	P	S 0 1	
173	P 1 1 1	100	P	S 0 1	
174	P 1 1 2	143	P	S 0 1	
175	P 1 1 3	293	P	S 0 1	
176	P 1 1 4	100	P	S 0 1	
177	P 1 1 5	100	P	S 0 1	
178	P 1 1 6	100	P	S 0 1	
179	P 1 1 8	100	P	S 0 1	
180	P 1 1 9	143	P	S 0 1	
181	P 1 2 0	293	P	S 0 1	
182	P 1 2 1	100	P	S 0 1	
183	P 1 2 2	100	P	S 0 1	
184	P 1 2 3	100	P	S 0 1	
185	P 1 2 7	100	P	S 0 1	
186	P 1 2 8	100	P	S 0 1	
187	P 1 8 5	100	P	S 0 1	
188	P 1 8 8	100	P	S 0 1	
189	P 1 8 9	100	P	S 0 1	
190	P 1 9 0	100	P	S 0 1	
191	P 1 9 1	100	P	S 0 1	
192	P 1 9 2	100	P	S 0 1	
193	P 1 9 4	100	P	S 0 1	
194	P 1 9 6	100	P	S 0 1	
195	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)					
196	P198	100	P	S01	
197	P199	100	P	S01	
198	P201	100	P	S01	
199	P202	100	P	S01	
200	P203	100	P	S01	
201	P204	100	P	S01	
202	P205	100	P	S01	
203	U001	293	P	S01	
204	U002	954	P	S01	
205	U003	485	P	S01	
206	U004	100	P	S01	
207	U005	100	P	S01	
208	U006	100	P	S01	
209	U007	143	P	S01	
210	U008	143	P	S01	
211	U009	143	P	S01	
212	U010	100	P	S01	
213	U011	100	P	S01	
214	U012	293	P	S01	
215	U014	100	P	S01	
216	U015	100	P	S01	
217	U016	100	P	S01	
218	U017	100	P	S01	
219	U018	143	P	S01	
220	U019	470	P	S01	
221	U020	100	P	S01	
222	U021	100	P	S01	
223	U022	293	P	S01	
224	U023	100	P	S01	
225	U024	100	P	S01	
226	U025	100	P	S01	
227	U026	100	P	S01	
228	U027	100	P	S01	
229	U028	100	P	S01	
230	U029	100	P	S01	
231	U030	293	P	S01	
232	U031	100	P	S01	
233	U032	293	P	S01	
234	U033	100	P	S01	
235	U034	143	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)					
235	U004	100	P	S01	
236	U005	100	P	S01	
237	U006	100	P	S01	
238	U007	143	P	S01	
239	U008	100	P	S01	
240	U009	100	P	S01	
241	U010	143	P	S01	
242	U011	100	P	S01	
243	U012	100	P	S01	
244	U014	293	P	S01	
245	U015	293	P	S01	
246	U016	100	P	S01	
247	U017	100	P	S01	
248	U018	100	P	S01	
249	U019	100	P	S01	
250	U020	100	P	S01	
251	U021	100	P	S01	
252	U022	293	P	S01	
253	U023	100	P	S01	
254	U024	143	P	S01	
255	U025	293	P	S01	
256	U026	293	P	S01	
257	U027	100	P	S01	
258	U028	100	P	S01	
259	U029	100	P	S01	
260	U030	100	P	S01	
261	U031	100	P	S01	
262	U032	100	P	S01	
263	U033	100	P	S01	
264	U034	100	P	S01	
265	U035	143	P	S01	
266	U036	100	P	S01	
267	U037	100	P	S01	
268	U038	165	P	S01	
269	U039	100	P	S01	
270	U041	100	P	S01	
271	U042	100	P	S01	
272	U043	100	P	S01	
273	U044	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	U 06 76	100	P	S 01	
275	U 07 77	293	P	S 01	
276	U 07 78	100	P	S 01	
277	U 07 79	100	P	S 01	
278	U 08 04	4,129	P	S 01 T 04	
279	U 08 11	100	P	S 01	
280	U 08 12	100	P	S 01	
281	U 08 13	100	P	S 01	
282	U 08 14	100	P	S 01	
283	U 08 15	143	P	S 01	
284	U 08 16	100	P	S 01	
285	U 08 17	100	P	S 01	
286	U 08 18	100	P	S 01	
287	U 08 19	100	P	S 01	
288	U 09 10	100	P	S 01	
289	U 09 11	518	P	S 01	
290	U 09 12	143	P	S 01	
291	U 09 13	100	P	S 01	
292	U 09 14	100	P	S 01	
293	U 09 15	100	P	S 01	
294	U 09 16	100	P	S 01	
295	U 09 17	100	P	S 01	
296	U 09 18	100	P	S 01	
297	U 09 19	100	P	S 01	
298	U 10 01	100	P	S 01	
299	U 10 02	100	P	S 01	
300	U 10 03	143	P	S 01	
301	U 10 05	100	P	S 01	
302	U 10 06	100	P	S 01	
303	U 10 07	100	P	S 01	
304	U 10 08	293	P	S 01	
305	U 10 09	143	P	S 01	
306	U 11 10	100	P	S 01	
307	U 11 11	100	P	S 01	
308	U 11 12	293	P	S 01	
309	U 11 13	100	P	S 01	
310	U 11 14	100	P	S 01	
311	U 11 15	293	P	S 01	
312	U 11 16	100	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 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 9 0	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	U 2 4 9	100	P	S 0 1	
431	U 2 7 1	100	P	S 0 1	
432	U 2 7 8	100	P	S 0 1	
433	U 2 7 9	100	P	S 0 1	
434	U 2 8 0	100	P	S 0 1	
435	U 3 2 8	100	P	S 0 1	
436	U 3 5 3	100	P	S 0 1	
437	U 3 5 9	100	P	S 0 1	
438	U 3 6 4	100	P	S 0 1	
439	U 3 6 7	100	P	S 0 1	
440	U 3 7 2	100	P	S 0 1	
441	U 3 7 3	100	P	S 0 1	
442	U 3 8 7	100	P	S 0 1	
443	U 3 8 9	100	P	S 0 1	
444	U 3 9 4	100	P	S 0 1	
445	U 3 9 5	100	P	S 0 1	
446	U 4 0 4	100	P	S 0 1	
447	U 4 0 9	100	P	S 0 1	
448	U 4 1 0	100	P	S 0 1	
449	U 4 1 1	100	P	S 0 1	
450					
451					
452					
453					
454					
455					
456					
457					
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468					

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	20,000	P	S	0	1							
3	**1**	D	0	3	1	12,000	P	S	0	1							
3	**2**	D	0	3	2	19,000	P	S	0	1							
3	**3**	D	0	3	3	19,000	P	S	0	1							
3	**4**	D	0	3	4	19,000	P	S	0	1							
3	**5**	D	0	3	5	20,000	P	S	0	1							
3	**6**	D	0	3	6	9,000	P	S	0	1							
3	**7**	D	0	3	7	7,000	P	S	0	1							
3	**8**	D	0	3	8	4,000	P	S	0	1							
3	**9**	D	0	3	9	10,000	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)																	
4	**0**	D	0	4	0	15,000	P	S	0	1							
4	**1**	D	0	4	1	7,000	P	S	0	1							
4	**2**	D	0	4	2	12,000	P	S	0	1							
4	**3**	D	0	4	3	15,000	P	S	0	1							
4	**4**	F	0	0	1	660,000	P	S	0	1							
4	**5**	F	0	0	2	350,000	P	S	0	1							
4	**6**	F	0	0	3	250,000	P	S	0	1							
4	**7**	F	0	0	4	30,000	P	S	0	1							
4	**8**	F	0	0	5	250,000	P	S	0	1							
4	**9**	F	0	0	6	7,000	P	S	0	1							
5	**0**	F	0	0	7	28,000	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	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	4,000	P	S	0	1							
6	**5**	F	0	2	8	4,000	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	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)									(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 4	4,000	P	S 0 1	
194	P 1 9 6	4,000	P	S 0 1	
195	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)					
196	P198	4,000	P	S01	
197	P199	4,000	P	S01	
198	P201	4,000	P	S01	
199	P202	4,000	P	S01	
200	P203	4,000	P	S01	
201	P204	4,000	P	S01	
202	P205	4,000	P	S01	
203	U001	4,000	P	S01	
204	U002	4,000	P	S01	
205	U003	4,000	P	S01	
206	U004	4,000	P	S01	
207	U005	4,000	P	S01	
208	U006	4,000	P	S01	
209	U007	4,000	P	S01	
210	U008	4,000	P	S01	
211	U009	4,000	P	S01	
212	U010	4,000	P	S01	
213	U011	4,000	P	S01	
214	U012	4,000	P	S01	
215	U014	4,000	P	S01	
216	U015	4,000	P	S01	
217	U016	4,000	P	S01	
218	U017	4,000	P	S01	
219	U018	4,000	P	S01	
220	U019	4,000	P	S01	
221	U020	4,000	P	S01	
222	U021	4,000	P	S01	
223	U022	4,000	P	S01	
224	U023	4,000	P	S01	
225	U024	4,000	P	S01	
226	U025	4,000	P	S01	
227	U026	4,000	P	S01	
228	U027	4,000	P	S01	
229	U028	4,000	P	S01	
230	U029	4,000	P	S01	
231	U030	4,000	P	S01	
232	U031	4,000	P	S01	
233	U032	4,000	P	S01	
234	U033	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)					
235	U 0 3 4	4,000	P	S 0 1	
236	U 0 3 5	4,000	P	S 0 1	
237	U 0 3 6	4,000	P	S 0 1	
238	U 0 3 7	4,000	P	S 0 1	
239	U 0 3 8	4,000	P	S 0 1	
240	U 0 3 9	4,000	P	S 0 1	
241	U 0 4 1	4,000	P	S 0 1	
242	U 0 4 2	4,000	P	S 0 1	
243	U 0 4 3	4,000	P	S 0 1	
244	U 0 4 4	4,000	P	S 0 1	
245	U 0 4 5	4,000	P	S 0 1	
246	U 0 4 6	4,000	P	S 0 1	
247	U 0 4 7	4,000	P	S 0 1	
248	U 0 4 8	4,000	P	S 0 1	
249	U 0 4 9	4,000	P	S 0 1	
250	U 0 5 0	4,000	P	S 0 1	
251	U 0 5 1	4,000	P	S 0 1	
252	U 0 5 2	4,000	P	S 0 1	
253	U 0 5 3	4,000	P	S 0 1	
254	U 0 5 5	4,000	P	S 0 1	
255	U 0 5 6	4,000	P	S 0 1	
256	U 0 5 7	4,000	P	S 0 1	
257	U 0 5 8	4,000	P	S 0 1	
258	U 0 5 9	4,000	P	S 0 1	
259	U 0 6 0	4,000	P	S 0 1	
260	U 0 6 1	4,000	P	S 0 1	
261	U 0 6 2	4,000	P	S 0 1	
262	U 0 6 3	4,000	P	S 0 1	
263	U 0 6 4	4,000	P	S 0 1	
264	U 0 6 6	4,000	P	S 0 1	
265	U 0 6 7	4,000	P	S 0 1	
266	U 0 6 8	4,000	P	S 0 1	
267	U 0 6 9	4,000	P	S 0 1	
268	U 0 7 0	4,000	P	S 0 1	
269	U 0 7 1	4,000	P	S 0 1	
270	U 0 7 2	4,000	P	S 0 1	
271	U 0 7 3	4,000	P	S 0 1	
272	U 0 7 4	4,000	P	S 0 1	
273	U 0 7 5	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)					
274	U 06 76	4,000	P	S 01	
275	U 06 77	4,000	P	S 01	
276	U 06 78	4,000	P	S 01	
277	U 06 79	4,000	P	S 01	
278	U 06 80	4,000	P	S 01	
279	U 06 81	4,000	P	S 01	
280	U 06 82	4,000	P	S 01	
281	U 06 83	4,000	P	S 01	
282	U 06 84	4,000	P	S 01	
283	U 06 85	4,000	P	S 01	
284	U 06 86	4,000	P	S 01	
285	U 06 87	4,000	P	S 01	
286	U 06 88	4,000	P	S 01	
287	U 06 89	4,000	P	S 01	
288	U 06 90	4,000	P	S 01	
289	U 06 91	4,000	P	S 01	
290	U 06 92	4,000	P	S 01	
291	U 06 93	4,000	P	S 01	
292	U 06 94	4,000	P	S 01	
293	U 06 95	4,000	P	S 01	
294	U 06 96	4,000	P	S 01	
295	U 06 97	4,000	P	S 01	
296	U 06 98	4,000	P	S 01	
297	U 06 99	4,000	P	S 01	
298	U 07 01	4,000	P	S 01	
299	U 07 02	4,000	P	S 01	
300	U 07 03	4,000	P	S 01	
301	U 07 05	4,000	P	S 01	
302	U 07 06	4,000	P	S 01	
303	U 07 07	4,000	P	S 01	
304	U 07 08	4,000	P	S 01	
305	U 07 09	4,000	P	S 01	
306	U 07 10	4,000	P	S 01	
307	U 07 11	4,000	P	S 01	
308	U 07 12	4,000	P	S 01	
309	U 07 13	4,000	P	S 01	
310	U 07 14	4,000	P	S 01	
311	U 07 15	4,000	P	S 01	
312	U 07 16	4,000	P	S 01	
313	U 07 17	4,000	P	S 01	
314	U 07 18	4,000	P	S 01	
315	U 07 19	4,000	P	S 01	
316	U 07 20	4,000	P	S 01	
317	U 07 21	4,000	P	S 01	
318	U 07 22	4,000	P	S 01	
319	U 07 23	4,000	P	S 01	
320	U 07 24	4,000	P	S 01	
321	U 07 25	4,000	P	S 01	
322	U 07 26	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, 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 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	4,000	P	S 0 1	
3 5 5	U 1 6 0	4,000	P	S 0 1	
3 5 6	U 1 6 1	4,000	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	4,000	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	4,000	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	4,000	P	S 0 1	
3 8 3	U 1 8 9	4,000	P	S 0 1	
3 8 4	U 1 9 0	4,000	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	4,000	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 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 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	4,000	P	S 0 1	
4 1 5	U 2 2 6	7,000	P	S 0 1	
4 1 6	U 2 2 7	4,000	P	S 0 1	
4 1 7	U 2 2 8	7,000	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	7,000	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	4,000	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 L (Continued)					
430	U242 9	4,000	P	S01	
431	U271	4,000	P	S01	
432	U271 8	4,000	P	S01	
433	U271 9	4,000	P	S01	
434	U280	4,000	P	S01	
435	U328	4,000	P	S01	
436	U353	4,000	P	S01	
437	U359	4,000	P	S01	
438	U364	4,000	P	S01	
439	U367	4,000	P	S01	
440	U372	4,000	P	S01	
441	U373	4,000	P	S01	
442	U387	4,000	P	S01	
443	U389	4,000	P	S01	
444	U394	4,000	P	S01	
445	U395	4,000	P	S01	
446	U404	4,000	P	S01	
447	U409	4,000	P	S01	
448	U410	4,000	P	S01	
449	U411	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, 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)									(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	4,000	P	S	0	1							
	8	**0**	P	0	0	2	4,000	P	S	0	1							
	8	**1**	P	0	0	3	4,100	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	4,100	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	4,100	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	4,100	P	S	0	1							
1	**0**	**6**	P	0	3	0	4,100	P	S	0	1							
1	**0**	**7**	P	0	3	1	4,100	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	4,100	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 G (Continued)					
118	P 0 4 4	4,000	P	S 0 1	
119	P 0 4 5	4,000	P	S 0 1	
120	P 0 4 6	4,000	P	S 0 1	
121	P 0 4 7	4,000	P	S 0 1	
122	P 0 4 8	4,000	P	S 0 1	
123	P 0 4 9	4,000	P	S 0 1	
124	P 0 5 0	4,000	P	S 0 1	
125	P 0 5 1	4,000	P	S 0 1	
126	P 0 5 4	4,000	P	S 0 1	
127	P 0 5 6	4,100	P	S 0 1	
128	P 0 5 7	4,000	P	S 0 1	
129	P 0 5 8	4,000	P	S 0 1	
130	P 0 5 9	4,000	P	S 0 1	
131	P 0 6 0	4,000	P	S 0 1	
132	P 0 6 2	4,000	P	S 0 1	
133	P 0 6 3	4,100	P	S 0 1	
134	P 0 6 4	4,000	P	S 0 1	
135	P 0 6 5	4,000	P	S 0 1	
136	P 0 6 6	4,000	P	S 0 1	
137	P 0 6 7	4,000	P	S 0 1	
138	P 0 6 8	4,100	P	S 0 1	
139	P 0 6 9	4,000	P	S 0 1	
140	P 0 7 0	4,000	P	S 0 1	
141	P 0 7 1	4,000	P	S 0 1	
142	P 0 7 2	4,000	P	S 0 1	
143	P 0 7 3	4,100	P	S 0 1	
144	P 0 7 4	4,000	P	S 0 1	
145	P 0 7 5	4,000	P	S 0 1	
146	P 0 7 6	4,000	P	S 0 1	
147	P 0 7 7	4,000	P	S 0 1	
148	P 0 7 8	4,000	P	S 0 1	
149	P 0 8 1	4,000	P	S 0 1	
150	P 0 8 2	4,000	P	S 0 1	
151	P 0 8 4	4,000	P	S 0 1	
152	P 0 8 5	4,000	P	S 0 1	
153	P 0 8 7	4,000	P	S 0 1	
154	P 0 8 8	4,000	P	S 0 1	
155	P 0 8 9	4,000	P	S 0 1	
156	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 G (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	4,100	P	S 0 1	
160	P 0 9 6	4,100	P	S 0 1	
161	P 0 9 7	4,000	P	S 0 1	
162	P 0 9 8	4,100	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	4,100	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	4,100	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 4	4,000	P	S 0 1	
194	P 1 9 6	4,000	P	S 0 1	
195	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)					
196	P198	4,000	P	S01	
197	P199	4,000	P	S01	
198	P201	4,000	P	S01	
199	P202	4,000	P	S01	
200	P203	4,000	P	S01	
201	P204	4,000	P	S01	
202	P205	4,000	P	S01	
203	U001	4,100	P	S01	
204	U002	7,100	P	S01	
205	U003	4,100	P	S01	
206	U004	4,000	P	S01	
207	U005	4,000	P	S01	
208	U006	4,000	P	S01	
209	U007	4,000	P	S01	
210	U008	4,000	P	S01	
211	U009	4,000	P	S01	
212	U010	4,000	P	S01	
213	U011	4,000	P	S01	
214	U012	4,100	P	S01	
215	U014	4,000	P	S01	
216	U015	4,000	P	S01	
217	U016	4,000	P	S01	
218	U017	4,000	P	S01	
219	U018	4,000	P	S01	
220	U019	4,100	P	S01	
221	U020	4,000	P	S01	
222	U021	4,000	P	S01	
223	U022	4,100	P	S01	
224	U023	4,000	P	S01	
225	U024	4,000	P	S01	
226	U025	4,000	P	S01	
227	U026	4,000	P	S01	
228	U027	4,000	P	S01	
229	U028	4,000	P	S01	
230	U029	4,100	P	S01	
231	U030	4,000	P	S01	
232	U031	4,100	P	S01	
233	U032	4,000	P	S01	
234	U033	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)					
235	U 0 3 4	4,000	P	S 0 1	
236	U 0 3 5	4,000	P	S 0 1	
237	U 0 3 6	4,000	P	S 0 1	
238	U 0 3 7	4,100	P	S 0 1	
239	U 0 3 8	4,000	P	S 0 1	
240	U 0 3 9	4,000	P	S 0 1	
241	U 0 4 1	4,000	P	S 0 1	
242	U 0 4 2	4,000	P	S 0 1	
243	U 0 4 3	4,000	P	S 0 1	
244	U 0 4 4	4,100	P	S 0 1	
245	U 0 4 5	4,100	P	S 0 1	
246	U 0 4 6	4,000	P	S 0 1	
247	U 0 4 7	4,000	P	S 0 1	
248	U 0 4 8	4,000	P	S 0 1	
249	U 0 4 9	4,000	P	S 0 1	
250	U 0 5 0	4,000	P	S 0 1	
251	U 0 5 1	4,000	P	S 0 1	
252	U 0 5 2	4,100	P	S 0 1	
253	U 0 5 3	4,000	P	S 0 1	
254	U 0 5 5	4,000	P	S 0 1	
255	U 0 5 6	4,100	P	S 0 1	
256	U 0 5 7	4,100	P	S 0 1	
257	U 0 5 8	4,000	P	S 0 1	
258	U 0 5 9	4,000	P	S 0 1	
259	U 0 6 0	4,000	P	S 0 1	
260	U 0 6 1	4,000	P	S 0 1	
261	U 0 6 2	4,000	P	S 0 1	
262	U 0 6 3	4,000	P	S 0 1	
263	U 0 6 4	4,000	P	S 0 1	
264	U 0 6 6	4,000	P	S 0 1	
265	U 0 6 7	4,000	P	S 0 1	
266	U 0 6 8	4,000	P	S 0 1	
267	U 0 6 9	4,000	P	S 0 1	
268	U 0 7 0	4,000	P	S 0 1	
269	U 0 7 1	4,000	P	S 0 1	
270	U 0 7 2	4,000	P	S 0 1	
271	U 0 7 3	4,000	P	S 0 1	
272	U 0 7 4	4,000	P	S 0 1	
273	U 0 7 5	4,100	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 54, Area G (Continued)					
274	U 06	4,000	P	S 01	
275	U 07	4,100	P	S 01	
276	U 08	4,000	P	S 01	
277	U 09	4,000	P	S 01	
278	U 80	12,000	P	S 01	
279	U 81	4,000	P	S 01	
280	U 82	4,000	P	S 01	
281	U 83	4,000	P	S 01	
282	U 84	4,000	P	S 01	
283	U 85	4,000	P	S 01	
284	U 86	4,000	P	S 01	
285	U 87	4,000	P	S 01	
286	U 88	4,000	P	S 01	
287	U 89	4,000	P	S 01	
288	U 90	4,000	P	S 01	
289	U 91	4,000	P	S 01	
290	U 92	4,000	P	S 01	
291	U 93	4,000	P	S 01	
292	U 94	4,000	P	S 01	
293	U 95	4,000	P	S 01	
294	U 96	4,000	P	S 01	
295	U 97	4,000	P	S 01	
296	U 98	4,000	P	S 01	
297	U 99	4,000	P	S 01	
298	U 10 1	4,000	P	S 01	
299	U 10 2	4,000	P	S 01	
300	U 10 3	4,000	P	S 01	
301	U 10 5	4,000	P	S 01	
302	U 10 6	4,000	P	S 01	
303	U 10 7	4,000	P	S 01	
304	U 10 8	4,100	P	S 01	
305	U 10 9	4,000	P	S 01	
306	U 11 0	4,000	P	S 01	
307	U 11 1	4,000	P	S 01	
308	U 11 2	4,100	P	S 01	
309	U 11 3	4,000	P	S 01	
310	U 11 4	4,000	P	S 01	
311	U 11 5	4,100	P	S 01	
312	U 11 6	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, 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	U249	4,000	P	S01	
431	U271	4,000	P	S01	
432	U278	4,000	P	S01	
433	U279	4,000	P	S01	
434	U280	4,000	P	S01	
435	U328	4,000	P	S01	
436	U353	4,000	P	S01	
437	U359	4,000	P	S01	
438	U364	4,000	P	S01	
439	U367	4,000	P	S01	
440	U373	4,000	P	S01	
441	U375	4,000	P	S01	
442	U378	4,000	P	S01	
443	U379	4,000	P	S01	
444	U381	4,000	P	S01	
445	U383	4,000	P	S01	
446	U386	4,000	P	S01	
447	U387	4,000	P	S01	
448	U389	4,000	P	S01	
449	U390	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, 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	14,000	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 0 9 3	176	P	S 0 1	
158	P 0 9 4	176	P	S 0 1	
159	P 0 9 5	176	P	S 0 1	
160	P 0 9 6	176	P	S 0 1	
161	P 0 9 7	176	P	S 0 1	
162	P 0 9 8	176	P	S 0 1	
163	P 0 9 9	176	P	S 0 1	
164	P 1 0 1	176	P	S 0 1	
165	P 1 0 2	176	P	S 0 1	
166	P 1 0 3	176	P	S 0 1	
167	P 1 0 4	176	P	S 0 1	
168	P 1 0 5	176	P	S 0 1	
169	P 1 0 6	176	P	S 0 1	
170	P 1 0 8	176	P	S 0 1	
171	P 1 0 9	176	P	S 0 1	
172	P 1 1 0	176	P	S 0 1	
173	P 1 1 1	176	P	S 0 1	
174	P 1 1 2	176	P	S 0 1	
175	P 1 1 3	176	P	S 0 1	
176	P 1 1 4	176	P	S 0 1	
177	P 1 1 5	176	P	S 0 1	
178	P 1 1 6	176	P	S 0 1	
179	P 1 1 8	176	P	S 0 1	
180	P 1 1 9	176	P	S 0 1	
181	P 1 2 0	176	P	S 0 1	
182	P 1 2 1	176	P	S 0 1	
183	P 1 2 2	176	P	S 0 1	
184	P 1 2 3	176	P	S 0 1	
185	P 1 2 7	176	P	S 0 1	
186	P 1 2 8	176	P	S 0 1	
187	P 1 8 5	176	P	S 0 1	
188	P 1 8 8	176	P	S 0 1	
189	P 1 8 9	176	P	S 0 1	
190	P 1 9 0	176	P	S 0 1	
191	P 1 9 1	176	P	S 0 1	
192	P 1 9 2	176	P	S 0 1	
193	P 1 9 4	176	P	S 0 1	
194	P 1 9 6	176	P	S 0 1	
195	P 1 9 7	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)					
196	P198	176	P	S01	
197	P199	176	P	S01	
198	P201	176	P	S01	
199	P202	176	P	S01	
200	P203	176	P	S01	
201	P204	176	P	S01	
202	P205	176	P	S01	
203	U001	176	P	S01	
204	U002	176	P	S01	
205	U003	176	P	S01	
206	U004	176	P	S01	
207	U005	176	P	S01	
208	U006	176	P	S01	
209	U007	176	P	S01	
210	U008	176	P	S01	
211	U009	176	P	S01	
212	U010	176	P	S01	
213	U011	176	P	S01	
214	U012	176	P	S01	
215	U014	176	P	S01	
216	U015	176	P	S01	
217	U016	176	P	S01	
218	U017	176	P	S01	
219	U018	176	P	S01	
220	U019	176	P	S01	
221	U020	176	P	S01	
222	U021	176	P	S01	
223	U022	176	P	S01	
224	U023	176	P	S01	
225	U024	176	P	S01	
226	U025	176	P	S01	
227	U026	176	P	S01	
228	U027	176	P	S01	
229	U028	176	P	S01	
230	U029	176	P	S01	
231	U030	176	P	S01	
232	U031	176	P	S01	
233	U032	176	P	S01	
234	U033	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)					
235	U004	176	P	S01	
236	U004	176	P	S01	
237	U004	176	P	S01	
238	U004	176	P	S01	
239	U004	176	P	S01	
240	U004	176	P	S01	
241	U004	176	P	S01	
242	U004	176	P	S01	
243	U004	176	P	S01	
244	U004	176	P	S01	
245	U004	176	P	S01	
246	U004	176	P	S01	
247	U004	176	P	S01	
248	U004	176	P	S01	
249	U004	176	P	S01	
250	U005	176	P	S01	
251	U005	176	P	S01	
252	U005	176	P	S01	
253	U005	176	P	S01	
254	U005	176	P	S01	
255	U005	176	P	S01	
256	U005	176	P	S01	
257	U005	176	P	S01	
258	U005	176	P	S01	
259	U005	176	P	S01	
260	U006	176	P	S01	
261	U006	176	P	S01	
262	U006	176	P	S01	
263	U006	176	P	S01	
264	U006	176	P	S01	
265	U006	176	P	S01	
266	U006	176	P	S01	
267	U006	176	P	S01	
268	U006	176	P	S01	
269	U006	176	P	S01	
270	U007	176	P	S01	
271	U007	176	P	S01	
272	U007	176	P	S01	
273	U007	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	U 06 76	176	P	S 01	
275	U 07 77	176	P	S 01	
276	U 07 88	176	P	S 01	
277	U 07 99	176	P	S 01	
278	U 08 05	528	P	S 01	
279	U 08 11	176	P	S 01	
280	U 08 22	176	P	S 01	
281	U 08 33	176	P	S 01	
282	U 08 44	176	P	S 01	
283	U 08 55	176	P	S 01	
284	U 08 66	176	P	S 01	
285	U 08 77	176	P	S 01	
286	U 08 88	176	P	S 01	
287	U 08 99	176	P	S 01	
288	U 09 00	176	P	S 01	
289	U 09 11	176	P	S 01	
290	U 09 22	176	P	S 01	
291	U 09 33	176	P	S 01	
292	U 09 44	176	P	S 01	
293	U 09 55	176	P	S 01	
294	U 09 66	176	P	S 01	
295	U 09 77	176	P	S 01	
296	U 09 88	176	P	S 01	
297	U 09 99	176	P	S 01	
298	U 10 11	176	P	S 01	
299	U 10 22	176	P	S 01	
300	U 10 33	176	P	S 01	
301	U 10 55	176	P	S 01	
302	U 10 66	176	P	S 01	
303	U 10 77	176	P	S 01	
304	U 10 88	176	P	S 01	
305	U 10 99	176	P	S 01	
306	U 11 00	176	P	S 01	
307	U 11 11	176	P	S 01	
308	U 11 22	176	P	S 01	
309	U 11 33	176	P	S 01	
310	U 11 44	176	P	S 01	
311	U 11 55	176	P	S 01	
312	U 11 66	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)					
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)					
3 5 2	U 1 5 7	176	P	S 0 1	
3 5 3	U 1 5 8	176	P	S 0 1	
3 5 4	U 1 5 9	528	P	S 0 1	
3 5 5	U 1 6 0	176	P	S 0 1	
3 5 6	U 1 6 1	176	P	S 0 1	
3 5 7	U 1 6 2	176	P	S 0 1	
3 5 8	U 1 6 3	176	P	S 0 1	
3 5 9	U 1 6 4	176	P	S 0 1	
3 6 0	U 1 6 5	176	P	S 0 1	
3 6 1	U 1 6 6	176	P	S 0 1	
3 6 2	U 1 6 7	176	P	S 0 1	
3 6 3	U 1 6 8	176	P	S 0 1	
3 6 4	U 1 6 9	176	P	S 0 1	
3 6 5	U 1 7 0	176	P	S 0 1	
3 6 6	U 1 7 1	176	P	S 0 1	
3 6 7	U 1 7 2	176	P	S 0 1	
3 6 8	U 1 7 3	176	P	S 0 1	
3 6 9	U 1 7 4	176	P	S 0 1	
3 7 0	U 1 7 6	176	P	S 0 1	
3 7 1	U 1 7 7	176	P	S 0 1	
3 7 2	U 1 7 8	176	P	S 0 1	
3 7 3	U 1 7 9	176	P	S 0 1	
3 7 4	U 1 8 0	176	P	S 0 1	
3 7 5	U 1 8 1	176	P	S 0 1	
3 7 6	U 1 8 2	176	P	S 0 1	
3 7 7	U 1 8 3	176	P	S 0 1	
3 7 8	U 1 8 4	176	P	S 0 1	
3 7 9	U 1 8 5	176	P	S 0 1	
3 8 0	U 1 8 6	176	P	S 0 1	
3 8 1	U 1 8 7	176	P	S 0 1	
3 8 2	U 1 8 8	176	P	S 0 1	
3 8 3	U 1 8 9	176	P	S 0 1	
3 8 4	U 1 9 0	176	P	S 0 1	
3 8 5	U 1 9 1	176	P	S 0 1	
3 8 6	U 1 9 2	176	P	S 0 1	
3 8 7	U 1 9 3	176	P	S 0 1	
3 8 8	U 1 9 4	176	P	S 0 1	
3 8 9	U 1 9 6	176	P	S 0 1	
3 9 0	U 1 9 7	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)					
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	U 2 4 9	176	P	S 0 1	
431	U 2 7 1	176	P	S 0 1	
432	U 2 7 8	176	P	S 0 1	
433	U 2 7 9	176	P	S 0 1	
434	U 2 8 0	176	P	S 0 1	
435	U 3 2 8	176	P	S 0 1	
436	U 3 5 3	176	P	S 0 1	
437	U 3 5 9	176	P	S 0 1	
438	U 3 6 4	176	P	S 0 1	
439	U 3 6 7	176	P	S 0 1	
440	U 3 7 2	176	P	S 0 1	
441	U 3 7 3	176	P	S 0 1	
442	U 3 8 7	176	P	S 0 1	
443	U 3 8 9	176	P	S 0 1	
444	U 3 9 4	176	P	S 0 1	
445	U 3 9 5	176	P	S 0 1	
446	U 4 0 4	176	P	S 0 1	
447	U 4 0 9	176	P	S 0 1	
448	U 4 1 0	176	P	S 0 1	
449	U 4 1 1	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, Material Disposal Area H (Shaft 9) [a]																	
	1	D	0	0	3	15	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)									(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)																	
4	**0**	P	0	1	5	6,000	P	S	0	1							
4	**1**	P	0	2	9	1,500	P	S	0	1							
4	**2**	P	0	3	0	1,500	P	S	0	1							
4	**3**	P	0	3	1	1,500	P	S	0	1							
4	**4**	P	0	3	8	1,500	P	S	0	1							
4	**5**	P	0	5	6	3,000	P	S	0	1							
4	**6**	P	0	6	3	1,500	P	S	0	1							
4	**7**	P	0	6	8	1,500	P	S	0	1							
4	**8**	P	0	7	3	1,500	P	S	0	1							
4	**9**	P	0	7	6	1,500	P	S	0	1							
5	**0**	P	0	7	8	1,500	P	S	0	1							
5	**1**	P	0	9	5	1,500	P	S	0	1							
5	**2**	P	0	9	6	1,500	P	S	0	1							
5	**3**	P	0	9	8	1,500	P	S	0	1							
5	**4**	P	0	9	9	500	P	S	0	1							
5	**5**	P	1	0	6	1,500	P	S	0	1							
5	**6**	P	1	1	3	1,500	P	S	0	1							
5	**7**	P	1	2	0	1,500	P	S	0	1							
5	**8**	U	0	0	1	3,000	P	S	0	1							
5	**9**	U	0	0	2	1,500	P	S	0	1							
6	**0**	U	0	0	3	1,500	P	S	0	1							
6	**1**	U	0	1	2	1,500	P	S	0	1							
6	**2**	U	0	1	9	3,000	P	S	0	1							
6	**3**	U	0	2	2	1,500	P	S	0	1							
6	**4**	U	0	2	9	1,500	P	S	0	1							
6	**5**	U	0	3	1	1,500	P	S	0	1							
6	**6**	U	0	3	7	1,500	P	S	0	1							
6	**7**	U	0	4	4	1,500	P	S	0	1							
6	**8**	U	0	4	5	1,500	P	S	0	1							
6	**9**	U	0	5	2	1,500	P	S	0	1							
7	**0**	U	0	5	6	1,500	P	S	0	1							
7	**1**	U	0	5	7	1,500	P	S	0	1							
7	**2**	U	0	7	5	1,500	P	S	0	1							
7	**3**	U	0	7	7	1,500	P	S	0	1							
7	**4**	U	0	8	0	6,000	P	S	0	1							
7	**5**	U	1	0	3	500	P	S	0	1							
7	**6**	U	1	0	8	1,500	P	S	0	1							
7	**7**	U	1	1	2	1,500	P	S	0	1							
7	**8**	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)	(2) PROCESS DESCRIPTION (If a code is not entered in 9.D(1))
Technical Area 55 (Continued)					
79	U171 7	1,500	P	S 0 1	
80	U172 1	1,500	P	S 0 1	
81	U172 2	1,500	P	S 0 1	
82	U172 3	1,500	P	S 0 1	
83	U173 1	1,500	P	S 0 1	
84	U173 3	1,500	P	S 0 1	
85	U173 4	6,000	P	S 0 1	
86	U173 5	1,500	P	S 0 1	
87	U174 0	1,500	P	S 0 1	
88	U174 4	1,500	P	S 0 1	
89	U175 1	6,000	P	S 0 1	
90	U175 4	6,000	P	S 0 1	
91	U175 9	6,000	P	S 0 1	
92	U176 0	1,500	P	S 0 1	
93	U176 1	1,500	P	S 0 1	
94	U176 5	1,500	P	S 0 1	
95	U176 9	1,500	P	S 0 1	
96	U178 8	1,500	P	S 0 1	
97	U179 0	1,500	P	S 0 1	
98	U179 6	1,500	P	S 0 1	
99	U202 4	1,500	P	S 0 1	
100	U210 1	6,000	P	S 0 1	
101	U211 1	6,000	P	S 0 1	
102	U213 3	1,500	P	S 0 1	
103	U216 6	1,500	P	S 0 1	
104	U218 8	1,500	P	S 0 1	
105	U219 9	1,500	P	S 0 1	
106	U220 0	6,000	P	S 0 1	
107	U222 5	1,500	P	S 0 1	
108	U223 6	6,000	P	S 0 1	
109	U227 7	1,500	P	S 0 1	
110	U228 8	1,500	P	S 0 1	
111	U239 9	1,500	P	S 0 1	
112	U242 6	1,500	P	S 0 1	
113					
114					
115					
116					
117					

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 63																	
	1	D	0	0	1	3,300	P	S	0	1							
	2	D	0	0	2	3,950	P	S	0	1							
	3	D	0	0	3	1,850	P	S	0	1							
	4	D	0	0	4	25,250	P	S	0	1							
	5	D	0	0	5	820	P	S	0	1							
	6	D	0	0	6	5,150	P	S	0	1							
	7	D	0	0	7	37,750	P	S	0	1							
	8	D	0	0	8	54,000	P	S	0	1							
	9	D	0	0	9	1,000	P	S	0	1							
1	**0**	D	0	1	0	450	P	S	0	1							
1	**1**	D	0	1	1	25,400	P	S	0	1							
1	**2**	D	0	1	2	180	P	S	0	1							
1	**3**	D	0	1	3	40	P	S	0	1							
1	**4**	D	0	1	4	40	P	S	0	1							
1	**5**	D	0	1	5	70	P	S	0	1							
1	**6**	D	0	1	6	40	P	S	0	1							
1	**7**	D	0	1	7	40	P	S	0	1							
1	**8**	D	0	1	8	300	P	S	0	1							
1	**9**	D	0	1	9	250	P	S	0	1							
2	**0**	D	0	2	0	300	P	S	0	1							
2	**1**	D	0	2	1	150	P	S	0	1							
2	**2**	D	0	2	2	330	P	S	0	1							
2	**3**	D	0	2	3	40	P	S	0	1							
2	**4**	D	0	2	4	40	P	S	0	1							
2	**5**	D	0	2	5	40	P	S	0	1							
2	**6**	D	0	2	6	40	P	S	0	1							
2	**7**	D	0	2	7	220	P	S	0	1							
2	**8**	D	0	2	8	400	P	S	0	1							
2	**9**	D	0	2	9	70	P	S	0	1							
3	**0**	D	0	3	0	300	P	S	0	1							
3	**1**	D	0	3	1	220	P	S	0	1							
3	**2**	D	0	3	2	290	P	S	0	1							
3	**3**	D	0	3	3	290	P	S	0	1							
3	**4**	D	0	3	4	290	P	S	0	1							
3	**5**	D	0	3	5	300	P	S	0	1							
3	**6**	D	0	3	6	190	P	S	0	1							
3	**7**	D	0	3	7	70	P	S	0	1							
3	**8**	D	0	3	8	140	P	S	0	1							
3	**9**	D	0	3	9	200	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 63 (Continued)																	
4	**0**	D	0	4	0	250	P	S	0	1							
4	**1**	D	0	4	1	170	P	S	0	1							
4	**2**	D	0	4	2	220	P	S	0	1							
4	**3**	D	0	4	3	250	P	S	0	1							
4	**4**	F	0	0	1	64,100	P	S	0	1							
4	**5**	F	0	0	2	34,500	P	S	0	1							
4	**6**	F	0	0	3	28,500	P	S	0	1							
4	**7**	F	0	0	4	350	P	S	0	1							
4	**8**	F	0	0	5	32,500	P	S	0	1							
4	**9**	F	0	0	6	70	P	S	0	1							
5	**0**	F	0	0	7	180	P	S	0	1							
5	**1**	F	0	0	8	70	P	S	0	1							
5	**2**	F	0	0	9	80	P	S	0	1							
5	**3**	F	0	1	0	40	P	S	0	1							
5	**4**	F	0	1	1	40	P	S	0	1							
5	**5**	F	0	1	2	40	P	S	0	1							
5	**6**	F	0	1	9	40	P	S	0	1							
5	**7**	F	0	2	0	40	P	S	0	1							
5	**8**	F	0	2	1	40	P	S	0	1							
5	**9**	F	0	2	2	40	P	S	0	1							
6	**0**	F	0	2	3	40	P	S	0	1							
6	**1**	F	0	2	4	40	P	S	0	1							
6	**2**	F	0	2	5	40	P	S	0	1							
6	**3**	F	0	2	6	40	P	S	0	1							
6	**4**	F	0	2	7	40	P	S	0	1							
6	**5**	F	0	2	8	40	P	S	0	1							
6	**6**	F	0	3	2	40	P	S	0	1							
6	**7**	F	0	3	4	40	P	S	0	1							
6	**8**	F	0	3	5	40	P	S	0	1							
6	**9**	F	0	3	7	40	P	S	0	1							
7	**0**	F	0	3	8	40	P	S	0	1							
7	**1**	F	0	3	9	40	P	S	0	1							
7	**2**	K	0	4	4	220	P	S	0	1							
7	**3**	K	0	4	5	40	P	S	0	1							
7	**4**	K	0	4	6	40	P	S	0	1							
7	**5**	K	0	4	7	40	P	S	0	1							
7	**6**	K	0	8	4	50	P	S	0	1							
7	**7**	K	1	0	1	50	P	S	0	1							
7	**8**	K	1	0	2	50	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 63 (Continued)					
79	P 00 1	40	P	S 01	
80	P 00 2	40	P	S 01	
81	P 00 3	40	P	S 01	
82	P 00 4	40	P	S 01	
83	P 00 5	40	P	S 01	
84	P 00 6	40	P	S 01	
85	P 00 7	40	P	S 01	
86	P 00 8	40	P	S 01	
87	P 00 9	40	P	S 01	
88	P 01 0	40	P	S 01	
89	P 01 1	40	P	S 01	
90	P 01 2	40	P	S 01	
91	P 01 3	40	P	S 01	
92	P 01 4	40	P	S 01	
93	P 01 5	40	P	S 01	
94	P 01 6	40	P	S 01	
95	P 01 7	40	P	S 01	
96	P 01 8	40	P	S 01	
97	P 02 0	40	P	S 01	
98	P 02 1	40	P	S 01	
99	P 02 2	40	P	S 01	
100	P 02 3	40	P	S 01	
101	P 02 4	40	P	S 01	
102	P 02 6	40	P	S 01	
103	P 02 7	40	P	S 01	
104	P 02 8	40	P	S 01	
105	P 02 9	40	P	S 01	
106	P 03 0	40	P	S 01	
107	P 03 1	40	P	S 01	
108	P 03 3	40	P	S 01	
109	P 03 4	40	P	S 01	
110	P 03 6	40	P	S 01	
111	P 03 7	40	P	S 01	
112	P 03 8	40	P	S 01	
113	P 03 9	40	P	S 01	
114	P 04 0	40	P	S 01	
115	P 04 1	40	P	S 01	
116	P 04 2	40	P	S 01	
117	P 04 3	40	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 63 (Continued)																		
1	**1**	**8**	P	0	4	4	40	P	S	0	1							
1	**1**	**9**	P	0	4	5	40	P	S	0	1							
1	**2**	**0**	P	0	4	6	40	P	S	0	1							
1	**2**	**1**	P	0	4	7	40	P	S	0	1							
1	**2**	**2**	P	0	4	8	40	P	S	0	1							
1	**2**	**3**	P	0	4	9	40	P	S	0	1							
1	**2**	**4**	P	0	5	0	40	P	S	0	1							
1	**2**	**5**	P	0	5	1	40	P	S	0	1							
1	**2**	**6**	P	0	5	4	40	P	S	0	1							
1	**2**	**7**	P	0	5	6	40	P	S	0	1							
1	**2**	**8**	P	0	5	7	40	P	S	0	1							
1	**2**	**9**	P	0	5	8	40	P	S	0	1							
1	**3**	**0**	P	0	5	9	40	P	S	0	1							
1	**3**	**1**	P	0	6	0	40	P	S	0	1							
1	**3**	**2**	P	0	6	2	40	P	S	0	1							
1	**3**	**3**	P	0	6	3	40	P	S	0	1							
1	**3**	**4**	P	0	6	4	40	P	S	0	1							
1	**3**	**5**	P	0	6	5	40	P	S	0	1							
1	**3**	**6**	P	0	6	6	40	P	S	0	1							
1	**3**	**7**	P	0	6	7	40	P	S	0	1							
1	**3**	**8**	P	0	6	8	40	P	S	0	1							
1	**3**	**9**	P	0	6	9	40	P	S	0	1							
1	**4**	**0**	P	0	7	0	40	P	S	0	1							
1	**4**	**1**	P	0	7	1	40	P	S	0	1							
1	**4**	**2**	P	0	7	2	40	P	S	0	1							
1	**4**	**3**	P	0	7	3	40	P	S	0	1							
1	**4**	**4**	P	0	7	4	40	P	S	0	1							
1	**4**	**5**	P	0	7	5	40	P	S	0	1							
1	**4**	**6**	P	0	7	6	40	P	S	0	1							
1	**4**	**7**	P	0	7	7	40	P	S	0	1							
1	**4**	**8**	P	0	7	8	40	P	S	0	1							
1	**4**	**9**	P	0	8	1	40	P	S	0	1							
1	**5**	**0**	P	0	8	2	40	P	S	0	1							
1	**5**	**1**	P	0	8	4	40	P	S	0	1							
1	**5**	**2**	P	0	8	5	40	P	S	0	1							
1	**5**	**3**	P	0	8	7	40	P	S	0	1							
1	**5**	**4**	P	0	8	8	40	P	S	0	1							
1	**5**	**5**	P	0	8	9	40	P	S	0	1							
1	**5**	**6**	P	0	9	2	40	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 63 (Continued)					
157	P 0 9 3	40	P	S 0 1	
158	P 0 9 4	40	P	S 0 1	
159	P 0 9 5	40	P	S 0 1	
160	P 0 9 6	40	P	S 0 1	
161	P 0 9 7	40	P	S 0 1	
162	P 0 9 8	40	P	S 0 1	
163	P 0 9 9	40	P	S 0 1	
164	P 1 0 1	40	P	S 0 1	
165	P 1 0 2	40	P	S 0 1	
166	P 1 0 3	40	P	S 0 1	
167	P 1 0 4	40	P	S 0 1	
168	P 1 0 5	40	P	S 0 1	
169	P 1 0 6	40	P	S 0 1	
170	P 1 0 8	40	P	S 0 1	
171	P 1 0 9	40	P	S 0 1	
172	P 1 1 0	40	P	S 0 1	
173	P 1 1 1	40	P	S 0 1	
174	P 1 1 2	40	P	S 0 1	
175	P 1 1 3	40	P	S 0 1	
176	P 1 1 4	40	P	S 0 1	
177	P 1 1 5	40	P	S 0 1	
178	P 1 1 6	40	P	S 0 1	
179	P 1 1 8	40	P	S 0 1	
180	P 1 1 9	40	P	S 0 1	
181	P 1 2 0	40	P	S 0 1	
182	P 1 2 1	40	P	S 0 1	
183	P 1 2 2	40	P	S 0 1	
184	P 1 2 3	40	P	S 0 1	
185	P 1 2 7	40	P	S 0 1	
186	P 1 2 8	40	P	S 0 1	
187	P 1 8 5	40	P	S 0 1	
188	P 1 8 8	40	P	S 0 1	
189	P 1 8 9	40	P	S 0 1	
190	P 1 9 0	40	P	S 0 1	
191	P 1 9 1	40	P	S 0 1	
192	P 1 9 2	40	P	S 0 1	
193	P 1 9 4	40	P	S 0 1	
194	P 1 9 6	40	P	S 0 1	
195	P 1 9 7	40	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 63 (Continued)					
196	P198	40	P	S01	
197	P199	40	P	S01	
198	P201	40	P	S01	
199	P202	40	P	S01	
200	P203	40	P	S01	
201	P204	40	P	S01	
202	P205	40	P	S01	
203	U001	40	P	S01	
204	U002	70	P	S01	
205	U003	40	P	S01	
206	U004	40	P	S01	
207	U005	40	P	S01	
208	U006	40	P	S01	
209	U007	40	P	S01	
210	U008	40	P	S01	
211	U009	40	P	S01	
212	U010	40	P	S01	
213	U011	40	P	S01	
214	U012	40	P	S01	
215	U014	40	P	S01	
216	U015	40	P	S01	
217	U016	40	P	S01	
218	U017	40	P	S01	
219	U018	40	P	S01	
220	U019	40	P	S01	
221	U020	40	P	S01	
222	U021	40	P	S01	
223	U022	40	P	S01	
224	U023	40	P	S01	
225	U024	40	P	S01	
226	U025	40	P	S01	
227	U026	40	P	S01	
228	U027	40	P	S01	
229	U028	40	P	S01	
230	U029	40	P	S01	
231	U030	40	P	S01	
232	U031	40	P	S01	
233	U032	40	P	S01	
234	U033	40	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 63 (Continued)					
235	U004	40	P	S01	
236	U005	40	P	S01	
237	U006	40	P	S01	
238	U007	40	P	S01	
239	U008	40	P	S01	
240	U009	40	P	S01	
241	U010	40	P	S01	
242	U011	40	P	S01	
243	U012	40	P	S01	
244	U014	40	P	S01	
245	U015	40	P	S01	
246	U016	40	P	S01	
247	U017	40	P	S01	
248	U018	40	P	S01	
249	U019	40	P	S01	
250	U020	40	P	S01	
251	U021	40	P	S01	
252	U022	40	P	S01	
253	U023	40	P	S01	
254	U024	40	P	S01	
255	U025	40	P	S01	
256	U026	40	P	S01	
257	U027	40	P	S01	
258	U028	40	P	S01	
259	U029	40	P	S01	
260	U030	40	P	S01	
261	U031	40	P	S01	
262	U032	40	P	S01	
263	U033	40	P	S01	
264	U034	40	P	S01	
265	U035	40	P	S01	
266	U036	40	P	S01	
267	U037	40	P	S01	
268	U038	40	P	S01	
269	U039	40	P	S01	
270	U041	40	P	S01	
271	U042	40	P	S01	
272	U043	40	P	S01	
273	U044	40	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 63 (Continued)					
274	U 0 7 6	40	P	S 0 1	
275	U 0 7 7	40	P	S 0 1	
276	U 0 7 8	40	P	S 0 1	
277	U 0 7 9	40	P	S 0 1	
278	U 0 8 0	120	P	S 0 1	
279	U 0 8 1	40	P	S 0 1	
280	U 0 8 2	40	P	S 0 1	
281	U 0 8 3	40	P	S 0 1	
282	U 0 8 4	40	P	S 0 1	
283	U 0 8 5	40	P	S 0 1	
284	U 0 8 6	40	P	S 0 1	
285	U 0 8 7	40	P	S 0 1	
286	U 0 8 8	40	P	S 0 1	
287	U 0 8 9	40	P	S 0 1	
288	U 0 9 0	40	P	S 0 1	
289	U 0 9 1	40	P	S 0 1	
290	U 0 9 2	40	P	S 0 1	
291	U 0 9 3	40	P	S 0 1	
292	U 0 9 4	40	P	S 0 1	
293	U 0 9 5	40	P	S 0 1	
294	U 0 9 6	40	P	S 0 1	
295	U 0 9 7	40	P	S 0 1	
296	U 0 9 8	40	P	S 0 1	
297	U 0 9 9	40	P	S 0 1	
298	U 1 0 1	40	P	S 0 1	
299	U 1 0 2	40	P	S 0 1	
300	U 1 0 3	40	P	S 0 1	
301	U 1 0 5	40	P	S 0 1	
302	U 1 0 6	40	P	S 0 1	
303	U 1 0 7	40	P	S 0 1	
304	U 1 0 8	40	P	S 0 1	
305	U 1 0 9	40	P	S 0 1	
306	U 1 1 0	40	P	S 0 1	
307	U 1 1 1	40	P	S 0 1	
308	U 1 1 2	40	P	S 0 1	
309	U 1 1 3	40	P	S 0 1	
310	U 1 1 4	40	P	S 0 1	
311	U 1 1 5	40	P	S 0 1	
312	U 1 1 6	40	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 63 (Continued)					
3 1 3	U 1 1 7	40	P	S 0 1	
3 1 4	U 1 1 8	40	P	S 0 1	
3 1 5	U 1 1 9	40	P	S 0 1	
3 1 6	U 1 2 0	40	P	S 0 1	
3 1 7	U 1 2 1	40	P	S 0 1	
3 1 8	U 1 2 2	70	P	S 0 1	
3 1 9	U 1 2 3	40	P	S 0 1	
3 2 0	U 1 2 4	40	P	S 0 1	
3 2 1	U 1 2 5	40	P	S 0 1	
3 2 2	U 1 2 6	40	P	S 0 1	
3 2 3	U 1 2 7	40	P	S 0 1	
3 2 4	U 1 2 8	40	P	S 0 1	
3 2 5	U 1 2 9	40	P	S 0 1	
3 2 6	U 1 3 0	40	P	S 0 1	
3 2 7	U 1 3 1	40	P	S 0 1	
3 2 8	U 1 3 2	40	P	S 0 1	
3 2 9	U 1 3 3	40	P	S 0 1	
3 3 0	U 1 3 4	120	P	S 0 1	
3 3 1	U 1 3 5	40	P	S 0 1	
3 3 2	U 1 3 6	40	P	S 0 1	
3 3 3	U 1 3 7	40	P	S 0 1	
3 3 4	U 1 3 8	40	P	S 0 1	
3 3 5	U 1 4 0	40	P	S 0 1	
3 3 6	U 1 4 1	40	P	S 0 1	
3 3 7	U 1 4 2	40	P	S 0 1	
3 3 8	U 1 4 3	40	P	S 0 1	
3 3 9	U 1 4 4	40	P	S 0 1	
3 4 0	U 1 4 5	40	P	S 0 1	
3 4 1	U 1 4 6	40	P	S 0 1	
3 4 2	U 1 4 7	40	P	S 0 1	
3 4 3	U 1 4 8	40	P	S 0 1	
3 4 4	U 1 4 9	40	P	S 0 1	
3 4 5	U 1 5 0	40	P	S 0 1	
3 4 6	U 1 5 1	70	P	S 0 1	
3 4 7	U 1 5 2	40	P	S 0 1	
3 4 8	U 1 5 3	40	P	S 0 1	
3 4 9	U 1 5 4	40	P	S 0 1	
3 5 0	U 1 5 5	40	P	S 0 1	
3 5 1	U 1 5 6	40	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 63 (Continued)																		
3	**5**	**2**	U	1	5	7	40	P	S	0	1							
3	**5**	**3**	U	1	5	8	40	P	S	0	1							
3	**5**	**4**	U	1	5	9	40	P	S	0	1							
3	**5**	**5**	U	1	6	0	40	P	S	0	1							
3	**5**	**6**	U	1	6	1	40	P	S	0	1							
3	**5**	**7**	U	1	6	2	40	P	S	0	1							
3	**5**	**8**	U	1	6	3	40	P	S	0	1							
3	**5**	**9**	U	1	6	4	40	P	S	0	1							
3	**6**	**0**	U	1	6	5	40	P	S	0	1							
3	**6**	**1**	U	1	6	6	40	P	S	0	1							
3	**6**	**2**	U	1	6	7	40	P	S	0	1							
3	**6**	**3**	U	1	6	8	40	P	S	0	1							
3	**6**	**4**	U	1	6	9	40	P	S	0	1							
3	**6**	**5**	U	1	7	0	40	P	S	0	1							
3	**6**	**6**	U	1	7	1	40	P	S	0	1							
3	**6**	**7**	U	1	7	2	40	P	S	0	1							
3	**6**	**8**	U	1	7	3	40	P	S	0	1							
3	**6**	**9**	U	1	7	4	40	P	S	0	1							
3	**7**	**0**	U	1	7	6	40	P	S	0	1							
3	**7**	**1**	U	1	7	7	40	P	S	0	1							
3	**7**	**2**	U	1	7	8	40	P	S	0	1							
3	**7**	**3**	U	1	7	9	40	P	S	0	1							
3	**7**	**4**	U	1	8	0	40	P	S	0	1							
3	**7**	**5**	U	1	8	1	40	P	S	0	1							
3	**7**	**6**	U	1	8	2	40	P	S	0	1							
3	**7**	**7**	U	1	8	3	40	P	S	0	1							
3	**7**	**8**	U	1	8	4	40	P	S	0	1							
3	**7**	**9**	U	1	8	5	40	P	S	0	1							
3	**8**	**0**	U	1	8	6	40	P	S	0	1							
3	**8**	**1**	U	1	8	7	40	P	S	0	1							
3	**8**	**2**	U	1	8	8	40	P	S	0	1							
3	**8**	**3**	U	1	8	9	40	P	S	0	1							
3	**8**	**4**	U	1	9	0	40	P	S	0	1							
3	**8**	**5**	U	1	9	1	40	P	S	0	1							
3	**8**	**6**	U	1	9	2	40	P	S	0	1							
3	**8**	**7**	U	1	9	3	40	P	S	0	1							
3	**8**	**8**	U	1	9	4	40	P	S	0	1							
3	**8**	**9**	U	1	9	6	40	P	S	0	1							
3	**9**	**0**	U	1	9	7	40	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 63 (Continued)					
3 9 1	U 2 0 0	40	P	S 0 1	
3 9 2	U 2 0 1	40	P	S 0 1	
3 9 3	U 2 0 2	40	P	S 0 1	
3 9 4	U 2 0 3	40	P	S 0 1	
3 9 5	U 2 0 4	40	P	S 0 1	
3 9 6	U 2 0 5	40	P	S 0 1	
3 9 7	U 2 0 6	40	P	S 0 1	
3 9 8	U 2 0 7	40	P	S 0 1	
3 9 9	U 2 0 8	40	P	S 0 1	
4 0 0	U 2 0 9	40	P	S 0 1	
4 0 1	U 2 1 0	40	P	S 0 1	
4 0 2	U 2 1 1	40	P	S 0 1	
4 0 3	U 2 1 3	40	P	S 0 1	
4 0 4	U 2 1 4	40	P	S 0 1	
4 0 5	U 2 1 5	40	P	S 0 1	
4 0 6	U 2 1 6	40	P	S 0 1	
4 0 7	U 2 1 7	40	P	S 0 1	
4 0 8	U 2 1 8	40	P	S 0 1	
4 0 9	U 2 1 9	40	P	S 0 1	
4 1 0	U 2 2 0	70	P	S 0 1	
4 1 1	U 2 2 1	40	P	S 0 1	
4 1 2	U 2 2 2	40	P	S 0 1	
4 1 3	U 2 2 3	40	P	S 0 1	
4 1 4	U 2 2 5	40	P	S 0 1	
4 1 5	U 2 2 6	70	P	S 0 1	
4 1 6	U 2 2 7	40	P	S 0 1	
4 1 7	U 2 2 8	70	P	S 0 1	
4 1 8	U 2 3 4	40	P	S 0 1	
4 1 9	U 2 3 5	40	P	S 0 1	
4 2 0	U 2 3 6	40	P	S 0 1	
4 2 1	U 2 3 7	40	P	S 0 1	
4 2 2	U 2 3 8	40	P	S 0 1	
4 2 3	U 2 3 9	70	P	S 0 1	
4 2 4	U 2 4 0	40	P	S 0 1	
4 2 5	U 2 4 3	40	P	S 0 1	
4 2 6	U 2 4 4	40	P	S 0 1	
4 2 7	U 2 4 6	40	P	S 0 1	
4 2 8	U 2 4 7	40	P	S 0 1	
4 2 9	U 2 4 8	40	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 63 (Continued)					
430	U249	40	P	S01	
431	U271	40	P	S01	
432	U278	40	P	S01	
433	U279	40	P	S01	
434	U280	40	P	S01	
435	U328	40	P	S01	
436	U353	40	P	S01	
437	U359	40	P	S01	
438	U364	40	P	S01	
439	U367	40	P	S01	
440	U373	40	P	S01	
441	U375	40	P	S01	
442	U381	40	P	S01	
443	U383	40	P	S01	
444	U386	40	P	S01	
445	U387	40	P	S01	
446	U389	40	P	S01	
447	U390	40	P	S01	
448	U394	40	P	S01	
449	U395	40	P	S01	

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

EXPLANATION OF PROCESS CODE LISTINGS AND DESIGN CAPACITIES AT TECHNICAL AREA (TA) 55

Description	Capacity (gallons)	Associated Structure No./Area
Line 1 S01 Container Storage Units		
Container storage unit (B40) for RCRA[a]-regulated waste	21,500	TA-55-4, Basement
Container storage unit (B05) for RCRA[a]-regulated waste	3,600	TA-55-4, Basement
Container storage unit (K13) for RCRA[a]-regulated waste	2,500	TA-55-4, Basement
Container storage unit (B45) for RCRA[a]-regulated waste	11,000	TA-55-4, Basement
Container storage unit (Vault) for RCRA[a]-regulated waste	4,000	TA-55-4, Basement
Outdoor Pad for RCRA[a]-regulated waste	135,000	Near TA-55-4
Container storage unit (TA-55-0355 Pad) RCRA[a]-regulated waste	84,370	Near TA-55-185
Container storage unit (B13) for RCRA[a]-regulated waste	4,950	TA-55-4, Basement
Container storage unit (G12) for RCRA[a]-regulated waste	5,225	TA-55-4, Basement
TOTAL S01	**272,145**	

[a] RCRA is the Resource Conservation and Recovery Act.

EXPLANATION OF PROCESS CODE LISTINGS AND DESIGN CAPACITIES AT TECHNICAL AREA (TA) 55 (Continued)

Description	Capacity (gallons)	Associated Structure No./Area
Line 3 S02 Tank Storage System		
Storage tank system for RCRA[a]-regulated waste (evaporator glovebox storage tank component; cementation unit storage tank component)	137[b]	TA-55-4, Room 401
TOTAL S02	**137**	

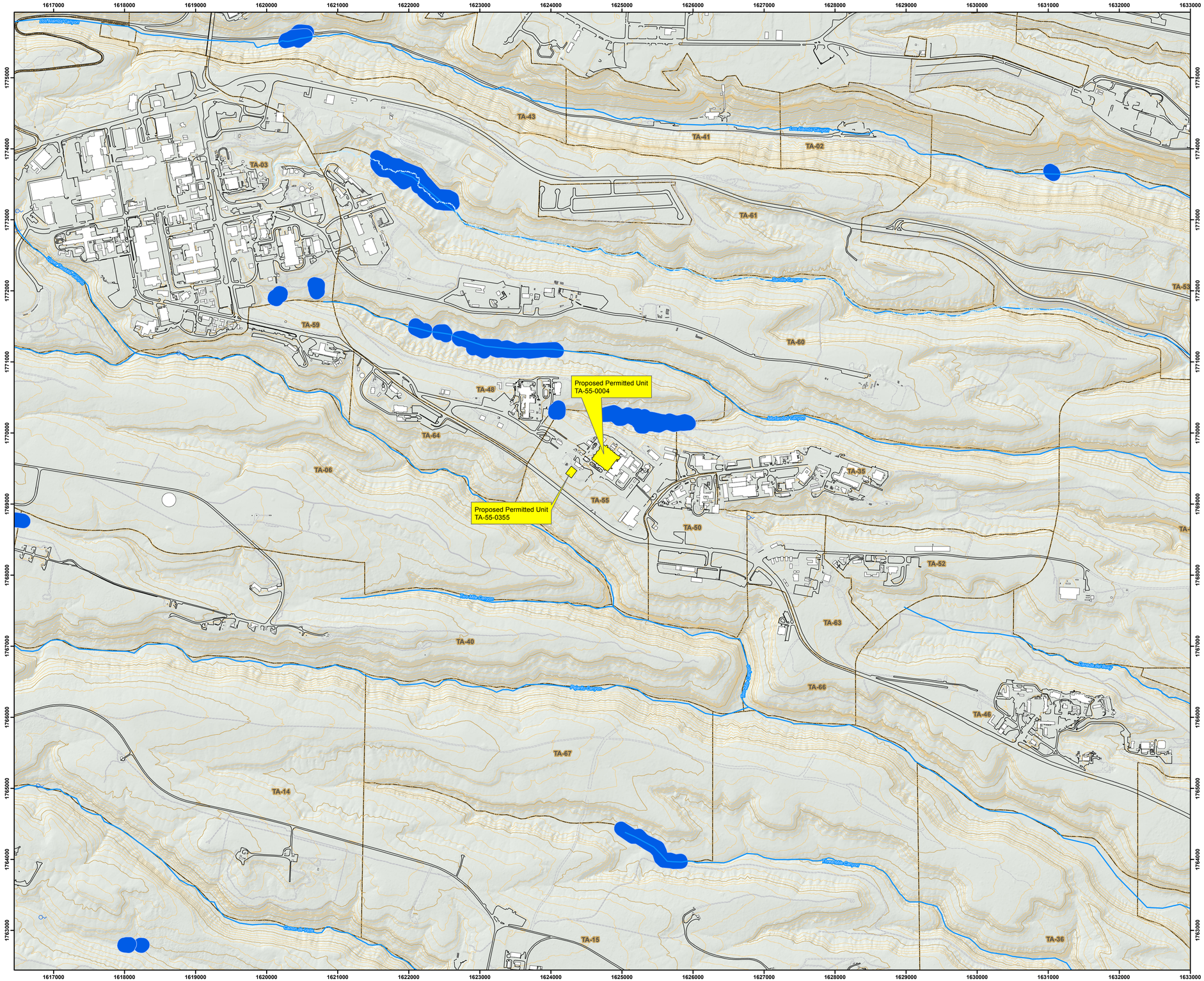
[a] RCRA is the Resource Conservation and Recovery Act.
[b] Total combined capacity for both storage tank components.

EXPLANATION OF PROCESS CODE LISTINGS AND DESIGN CAPACITIES AT TECHNICAL AREA (TA) 55 (Continued)

Description	Capacity (gallons per day)	Associated Structure No./Area
Line 1 T04 Treatment - Solidification		
Stabilization unit for RCRA[a]-regulated waste	150	TA-55-4, Room 401
TOTAL T04	**150**	

[a] RCRA is the Resource Conservation and Recovery Act.

LANL TA-55 Topographical Map



Legend

- Springs
- Streams, Perennial
- Drainage
- Roads, paved
- Roads, dirt
- Contours, 20 ft
- Contours, 100 ft
- Proposed Permitted Units
- Wetlands
- Structures
- TAs

N
W E
S

Kilometers

0.25 0.125 0 0.25 0.5

0.25 0.125 0 0.25 0.5

Miles

State Plane Cordinate System, New Mexico Central Zone.
1983 North American Datum. NGVD 1929
Map Units in feet.

Grid provides NM State Plane coordinates in feet.
Grid interval: 1000 ft

DISCLAIMER: This map was created for work processes associated with RCRA Permit.

All other uses for this map should be confirmed with ENV-RCRA staff.

Map Produced by ADESH-OIO-DO, Ben Sutter,
Date: 09 October, 2015
Map Reference Number: 15-0066-05d_TA55.mxd

TA-55-0355 PAD

TA-55, Building 4, Room B13

UCNI

LOS ALAMOS NATIONAL LABORATORY

THIS FIGURE CONTAINS UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION (UCNI) AS DEFINED BY SECTION 148 OF THE ATOMIC ENERGY ACT

TA-55, Building 4, Room G12

UCNI

LOS ALAMOS NATIONAL LABORATORY

THIS FIGURE CONTAINS UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION (UCNI) AS DEFINED BY SECTION 148 OF THE ATOMIC ENERGY ACT

ATTACHMENT B

SEISMIC REPORT FOR THE TA-55 FACILITY

ATTACHMENT C

MODIFICATIONS TO THE RCRA HAZARDOUS WASTE FACLITITY PERMIT (REDLINE)

Permittees shall maintain the chemical-resistant epoxy and protective coating in accordance with Permit Section 3.7.1 and the manufacturer's specifications.

3.12.3.4 TA-54-58

The Permittees shall treat the concrete berms and the base of the concrete pad with chemical-resistant epoxy filler-sealer and protective coating, providing an impervious seal to contain any potential leaks, spills, or accumulation of precipitation. The Permittees shall maintain the chemical-resistant epoxy and protective coating in accordance with Permit Section 3.7.1 and the manufacturer's specifications.

3.12.3.5 TA-54-39 and Containment Pad

3.12.3.5.i Room 101

The Permittees shall treat the curb and floor of this 878 square foot room with chemical-resistant epoxy filler-sealer and protective coating, providing an impervious seal to contain any potential leaks, spills, or accumulation of precipitation. The Permittees shall maintain the chemical-resistant epoxy and protective coating in accordance with Permit Section 3.7.1 and the manufacturer's specifications.

3.12.3.5.ii Containment Pad

The Permittees shall treat the concrete floor and curb with chemical-resistant epoxy filler-sealer and protective coating, providing an impervious seal to contain any potential leaks, spills, or accumulation of precipitation. The Permittees shall maintain the chemical-resistant epoxy and protective coating in accordance with Permit Section 3.7.1 and the manufacturer's specifications.

3.12.3.6 Storage Sheds 144, 145, 146, and 177

The Permittees shall ensure the interior of each shed and sump is treated with chemically-resistant epoxy paint. The Permittees shall maintain the chemically-resistant epoxy paint in accordance with Permit Section 3.7.1 of this Permit Part and the manufacturer's specifications.

3.13 TA-55 CONTAINER STORAGE REQUIREMENTS

3.13.1 General Operating Conditions

The Permittees shall ensure that storage of hazardous or mixed waste in containers at TA-55 occurs only in the permitted units B13, B45, B40, B05, G12, K13, the vault located at TA-55-4, TA-55-0355 Pad and the outdoor container storage pad located northwest of TA-55-4, and as identified in Attachment A (*Technical Area Unit Descriptions*) and Attachment J (*Hazardous Waste Management Units*).

ATTACHMENT A

TECHNICAL AREA (TA) - UNIT DESCRIPTIONS

TABLE OF CONTENTS

A.5 TA-55

TA-55 is located in the north central portion of Los Alamos National Laboratory on a mesa between a branch of Mortandad Canyon on the north and Two Mile Canyon on the south (*see* Figure 38 in Attachment N (*Figures)).* TA-55 is a plutonium processing facility, which began operating in 1978. Hazardous and mixed waste container storage at TA-55 is conducted at seven permitted units. These permitted units are identified as B40, B05, K13, B45, B13 and G12, the Vault, ~~and~~ the Container Storage Pad and the 55-0355 Pad. The B05 and, B45 permitted units are used to store containers with only non-liquid bearing waste (*i.e.*, solid form). These permitted units all reside in a building; therefore, run-on and run-off from storm events are not applicable. In the event of a water leak from facility systems, the TA-55-4 basement has sumps to contain the liquid. The Outdoor Storage Pad and the 55-0355 Pad are outdoor units, no free liquids will be stored at these units and containers will be stored in accordance with Permit Section 3.5.1.

A.5.1 B40

The B40 permitted unit is used to store containers of hazardous and mixed waste that may contain liquids. B40 is located in the southwest section of the TA-55-4 basement, as shown on Figure 40 in Attachment N (*Figures).* The permitted unit is L-shaped and has long dimensions of 61.5 by 55 feet (ft). The maximum storage capacity of this unit is 21,500 gallons (gal), the equivalent of 391 55-gal drums. The types of waste containers holding hazardous or mixed waste that are stored in B40 include: 5-, 10-, 12-, 15-, 30-, 55-, and 85-gal drums; large waste boxes; special order waste boxes; and standard waste boxes (SWB).

A.5.2 B05

The B05 permitted unit is used to store containers of hazardous and mixed waste that do not contain liquids. B05 is located in the southwest section of the TA-55-4 basement, as shown in Figure 42 in Attachment N (*Figures).* The permitted unit is rectangular shaped and is 26 ft long by 10 ft wide. The maximum storage capacity of this unit is 3,600 gal, the equivalent of 66 55-gal drums. The types of waste containers holding hazardous or mixed waste that will be stored in B05 include 30-, 55-, and 85-gal drums, large waste boxes; and SWBs.

A.5.3 K13

The K13 permitted unit is used to store containers of hazardous and mixed waste that may contain liquids. K13 is located in the northwest section of the TA-55-4 basement, as shown on Figure 41 in Attachment N (*Figures).* The permitted unit is rectangular shaped and is 12 ft long by 13 ft wide. The maximum storage capacity of this unit is 2,500 gal, the equivalent of 46 55-gal drums. The types of waste containers holding hazardous or mixed waste that will be stored in K13 include: 0.25-, 0.5-, 0.75-, 1-, 2-, 4-, and 6-liter/quart containers; 5-, 10-, 12-, and 15-gal containers; 30-, 55-, and 85-gal drums; and large waste boxes.

A.5.4 B45

The B45 permitted unit is used to store containers of hazardous and mixed waste that do not contain liquids. B45 is located in the northeast section of the TA-55-4 basement, as shown on Figure 43 in Attachment N (*Figures)*. The permitted unit is rectangular shaped and is 45 ft long by 17.5 ft wide. The maximum storage capacity of this unit is 11,000 gal, the equivalent of 200 55-gal drums. The types of waste containers holding hazardous or mixed waste that will be stored in B45 include: 5-, 10-, 12-, and 15-gal containers; 55- and 85-gal drums; large waste boxes; and SWBs.

A.5.5 B13

The B13 permitted unit is used to store containers of hazardous and mixed waste that do not contain liquids; therefore, no secondary containment or safety showers are present in B13. B13 is located in the northwest corner of the TA-55-4 basement, as shown on Figure 57 in Attachment N (*Figures*). This permitted unit is approximately 8 ft. high, 17 ft. 6 in. wide and 28 ft. 4 in. long. The maximum storage capacity of this unit is 4,950 gal. The types of waste containers holding hazardous or mixed waste that will be stored in B13 include: 30-, 55-, 85- gal. drums and SWBs.

A.5.6 G12

The G12 permitted unit is used to store containers of hazardous and mixed waste that do not contain liquids; therefore, no secondary containment or safety showers are present in G12. G12 is located in the northwest corner of the TA-55-4 basement, as shown on Figure 58 of Attachment N (*Figures*). This permitted unit is irregularly shaped (dimensions shown in Figure 58) with walls and ceilings that consist of chain link fencing. The maximum storage capacity of this unit is 5,225 gal. The types of waste containers holding hazardous or mixed waste that will be stored in G12 include: 30-, 55-, 85- gal drums; and SWBs.

~~A.5.5~~A.5.7 Vault

The Vault permitted unit is used to store containers of mixed waste that may contain liquids. The Vault is located along the eastern wall of the basement at TA-55-4, as shown on Figure 42 in Attachment N (*Figures)* and is approximately 79.5 ft long by 50.5 ft wide. The maximum storage capacity of this unit is 4,000 gal, the equivalent of approximately 73 55-gal drums. The types of waste containers holding mixed waste that will be stored in the Vault include: 0.25-, 0.5-, 0.75-, 1-, 2-, 4-, and 6-liter/quart containers; and 5-, 10-, 12-, 15-, 30- and 55-gal drums.

~~A.5.6~~A.5.8 Outdoor Storage Pad

The Container Storage Pad is used to store containers of hazardous and mixed waste that may contain liquids. The pad is located outside and south southwest of TA-55-4, as shown on Figures 39 and 45 in Attachment N (*Figures)*. It was installed in the mid-1980s and is constructed of asphaltic-concrete with a variable thickness of 4 to 6 inches (in.). The Container Storage Pad permitted unit is shaped like a trapezoid and measures 102 ft, 86 ft, 156 ft, and 105 ft. The pad is sloped, is elevated 2 to 4 in. above ground level, and has a culvert beneath the pad running from the northwest side to the southeast corner to minimize run-on of

precipitation. The storage capacity of this area is 135,000 gal, the equivalent of approximately 2,455 55-gal drums. The types of waste containers holding hazardous or mixed waste that will be stored on the container storage pad include: 0.25-, 0.5-, 0.75-, 1-, 2-, 4-, and 6-liter/quart containers; 30-, 55-, and 85-gal drums; SWBs; large waste boxes; and 5-, 10-, 12-, and 15-gal containers.

A.5.9 TA-55-0355 Pad

The TA-55-0355 Pad will be used to store containers of hazardous and mixed hazardous waste that do not contain liquids. The TA-55-355 Pad is located outside and south of the Outdoor Storage Pad and TA-55-4, as shown on Figure 59 in Attachment N (*Figures*). It is a concrete pad with a variable thickness of 4 to 6 inches and dimensions of 130 ft. long and 115 ft. wide. The pad also includes a steel roof structure with dimensions of approximately 93ft. long and 63 ft. wide. The pad has a slope of 1/8 inch per ft, sloping from north to south. The apron around the pad gently slopes away from the concrete pad that is under the canopy. Site drainage allows rain water to flow away from the pad. The unit boundary is approximately 130 ft long and 103 ft wide. Two walls with roll up doors for wind prevention are located on the south and west sides of the canopy. The maximum storage capacity on the pad will be 84,370 gallon (gal), the equivalent of approximately 1,534 - 55-gal drums. A mobile HENC system, three safes for the storage of calibration sources, and miscellaneous support equipment are currently located on the pad.

The TA-55-0355 Pad consists of one waste management unit that will provide storage in containers for hazardous waste or mixed waste. The types of waste containers holding hazardous or mixed waste that will be stored on the container storage pad includes: 30-, 55-, and 85- gal drums; standard waste boxes (SWBs); and large waste boxes.

~~A.5.7~~A.5.10 Mixed Waste Storage Tank System

There is one storage tank unit at TA-55 that is comprised of two tank components, the evaporator glovebox tank and the stabilization unit pencil tanks. The two tank components share a common piping and pumping system.

The evaporator glovebox tank was constructed in 1986. The stabilization unit pencil tanks were constructed in 1985, installed from 1987-88, and were considered existing tanks until new components were installed in 1996. These new components were determined to be a major, non-routine modification; therefore, the stabilization unit pencil tanks are subject to the new tank system regulations and are addressed as new tanks in accordance with the requirements of 40 CFR § 264.192, which is incorporated herein by reference.

The TA-55 storage tank unit is located at TA-55, Building 4, in Room 401 and has a maximum capacity of 560 Liters (L) (137 gallons [gal]). The storage tank system consists of two components, with six tanks, that are used to store evaporator bottoms solutions prior to stabilization.

Liquid waste comes primarily from the evaporator as evaporator bottoms in approximately 25-L batches. Unrecyclable evaporator distillate waste (corrosive only) is also cemented when

ATTACHMENT B

PART A APPLICATION

5. Other Environmental Permits

A. Facility Type (Enter code)	B. Permit Number	C. Description
National Pollutant Discharge Elimination System (NPDES):		
NPDES Construction General Permit:		
N	NMR12A---	NPDES Construction General Permit coverage for various individual construction projects: NMR120000
Industrial Point Source Permit:		
N	NM0028355	NPDES Industrial Point Source Discharge
NPDES Storm Water Multi-Sector General Permit (MSGP) for Industrial Activities		
N	NMR05~~G~~3~~B~~1~~2~~9~~1~~5	NPDES MSGP
NPDES Storm Water Individual Permit		
N	NM0003075 9	NPDES LANL Storm Water Individual Permit
NPDES Pesticides General Permit		
N	NMG87A041	NPDES Pesticides General Permit (PGP) for discharges from te application of pesticides
Resource Conservation and Recovery Act (RCRA):		
R	NM0890010515	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	~~Eight~~~~Twelve~~ (~~8~~12) Domestic Septic Tank/Leachfield Systems, Discharge Permit Application, June 2010 ~~(NMED approval pending).~~ Permit issued July 2015
E	DP-1793	On-Site Treatment and Land Application of Groundwater, Discharge Permit Application, December 2011. ~~(NMED approval pending)~~ Permit issued July 2015.
E	DP-1835	Injection of Treated Ground Water into the Regional Aquifer Through Six (6) Class V Underground Injection Control (UIC) Wells. Application Date: April 2015. Permit issued August 2016.
Clean Water Act Section 404 Dredge and Fill Permits with U.S. Army Corps of Engineers		
E	NWP-43	Water Canyon West Jemez road Storm Drain Controls. Project complete but subject to special monitoring conditions- 5 year monitoring.
E	NWP-38	Sandia Canyon TA-72 Stormwater Controls. Project not yet complete and subject to 5 years of monitoring.
E	NWP-38	Sandia Canyon Wetland (Grade Control Structure). Project complete but subject to special monitoring conditions- 5 year monitoring.
E	NWP-43	Pueblo Grade Control Spurs and E060.1 Gage Revitalization.
E	NWP-018	Section 404 Nationwide Permit 18 – Minor Discharges for various individually approved construction projects including NM Certification (2012)
E	NWP-33	Section 404 Nationwide Permit 33 – Temporary Construction, Access and Dewatering for various individually approved construction projects including NM Certification (2012)

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	~~177,600~~272,145	G	00~~96~~	
	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	

ATTACHMENT D

CONTINGENCY PLAN

LIST OF TABLES

Emergency Management Coordinator, who will coordinate necessary emergency actions throughout the county.

D.1.7.3 Los Alamos Medical Center

The Facility maintains a fully equipped decontamination room adjacent to the emergency room at LAMC. In the event that a case is sent to LAMC, support for the emergency room staff is provided by Facility occupational medical personnel. Radiation protection, industrial hygiene, and HAZMAT personnel also provide assistance to the emergency room staff; assistance from additional Facility resources is provided, as necessary. Assistance is coordinated through SEO-3:EM personnel.

D.2 EMERGENCY EQUIPMENT AND COMMUNICATIONS

D.2.1 Emergency Equipment

The Permittees shall make available the lists of emergency equipment listed in Table D-1 for use at any of Permittees' hazardous or mixed waste management units. The list includes emergency equipment available in the HAZMAT vehicles and trailers as well as supplemental emergency equipment maintained by the LAFD, Maintenance Site Services, and occupational medicine personnel. A list of emergency equipment available for use at specific hazardous and/or mixed waste management units is identified in Attachment Tables TA-3, D-1; TA-50, D-1; TA-54, Area L, D-1; TA-54, Area G, D-2; TA-54 West, D-3; TA-55 Building 4 First Floor, D-1; TA-55 Building 4 Basement, D-2; TA-55 Container Storage Pad, D-3~~,~~; TA-55-0355 Pad, D-4; and TA-63 Transuranic Waste Facility, D-4. Emergency equipment listed in these tables may be replaced and/or upgraded with functionally equivalent components and equipment, as necessary, for routine maintenance and repair.

D.2.2 Emergency Communications

The initial phase of an emergency may involve a small number of individuals at the affected area and that requires notification of the SEO-3:EM Duty Officer, utilizing local communication equipment and/or systems. When responding to hazardous and/or mixed waste emergencies, the Permittees shall ensure that SEO-3:EM personnel can provide communications between response units and emergency organizations.

D.2.2.1 Fire Alarms

Fire alarms are monitored 24 hours per day by trained personnel in the EOSC. Both the primary and backup buildings where the monitoring takes place have emergency power systems. The SEO-3:EM Duty Officer is notified when there is confirmed fire or smoke via the Los Alamos County Consolidated Dispatch Center.

mixed waste that present a potential threat to human health or the environment, as listed in Attachment Section D.3.1, require implementation of this Plan.

2. Hazardous and mixed wastes are stored on site at the Facility in a variety of containers. The general steps in handling hazardous and/or mixed waste spills are as follows:

1. Isolate the immediate area and deny entry to all unauthorized personnel;
2. Contain the spill by spreading sorbents or forming temporary dikes to prevent further migration (performed by properly trained personnel, if safe);
3. Monitor the spill area and sample the spilled waste and contaminated media.
4. Package the waste and contaminated media in sound containers;
5. Decontaminate the area and all involved equipment and personnel (followed by testing to assure adequate cleanup); and
6. Remove the waste and contaminated media (performed by appropriate waste management personnel).

3. The IC will determine the steps to be taken for spill mitigation. If initial mitigation of the spill is necessary and can be accomplished safely (by appropriately trained personnel) before the Emergency Manager arrives, a qualified member of the affected area's operating group will serve as the Facility Command Leader.

4. The Permittees shall ensure that hazardous and/or mixed waste spills are stabilized and cleaned up. During spill control and cleanup, all personnel shall wear appropriate personal protective equipment (PPE). Monitoring will be conducted to ensure that chemical and, as appropriate, radiological exposure is minimized. The collected material may be treated as hazardous or mixed waste, depending on the components present. Runoff from spills of listed hazardous or mixed waste that have migrated outside hazardous waste management areas must be contained and managed as hazardous or mixed waste, as appropriate. If the spill was from a characteristic hazardous or mixed waste and if it is determined by analysis that the runoff does not exhibit the characteristic (*i.e.*, ignitability, corrosivity, reactivity, and/or toxicity), the runoff need not be managed as characteristic waste. Temporary dikes may be constructed to contain runoff.

D.4.1 Spill Control Procedures

When a flammable organic solvent spill, a highly acidic spill, or a highly caustic spill has been stabilized with the contents of an organic solvent spill kit, an acid spill kit, or a caustic spill kit, respectively, the resulting material may be sorbed using a nonbiodegradable sorbent. Nonbiodegradable sorbent can be used to control any spill if it is known to be compatible with the spilled material. Appropriate containers or packaging shall be used to collect all spilled material and contaminated sorbent. Attachment Tables TA-3, D-1; TA-50, D-1; TA-54, Area L, D-1; TA-54, Area G, D-2; TA-54 West, D-3; TA-55 Building 4 First Floor, D-1; TA-55 Building 4 Basement, D-2; TA-55 Container Storage Pad, D-3; TA-55-0355 Pad, D-4; and TA-63 Transuranic Waste Facility, D-4 list emergency equipment available for spill control at specific units. The ultimate disposition of any contaminated sorbent or waste material shall be

TABLE D-2

TA-55 Building 4 Basement

Emergency Equipment

FIRE CONTROL EQUIPMENT

Halon, dry chemical, and/or carbon dioxide fire extinguishers are available near B40, B05, K13, B45, B13, G12 and the Vault.

Description of General Capabilities:
The fire extinguishers are portable, manually-operated units and can be used by any employee in case of fire.

Fire alarm pull boxes are located at B05, K13, B45, the Vault, and on each side of the fire door.

Description of General Capabilities:
Fire alarms can be activated by any employee in the event of fire to notify the Central Alarm System.

An automatic fire suppression sprinkler system is located throughout the basement at TA-55-4, including the Vault and the office and corridor associated with the Vault.

Fire hydrants are located outdoors on the north, south, and west sides of TA-55-4.

SPILL CONTROL EQUIPMENT

Self-containment pallets or cabinets are provided for containers of liquid and/or potentially liquid-bearing wastes stored at B40, K13, and the Vault.

COMMUNICATION EQUIPMENT

Telephones and intercom stations are located throughout the basement of TA-55-4. The telephones are capable of handling both incoming and outgoing calls. The intercom system is connected to the TA-55-4 Operations Center and allows the Operations Center to easily mobilize emergency response support.

Two-way radios are available from the TA-55 Operations Center located at TA-55, Building 0004, room 218, for personnel working in the basement at TA-55-4.

Personal pagers are issued to and carried by assigned personnel working in the basement of TA-55-4. These pagers are accessed by telephone.

Alarms at TA-55-4:

The fire alarm is an area-wide whooping sound.

TABLE D-4

TA-55-0355 Pad

Emergency Equipment

FIRE CONTROL EQUIPMENT

Four ABC rated fire extinguishers are located at the TA-55-0355 Pad. An ABC rated fire extinguisher is located in each vehicle used to transport waste containers to the unit.

Description of General Capabilities:

Portable and manually operated fire extinguishers may be used by any qualified employee in the event of a small fire. For larger fires, the Los Alamos Fire Department (LAFD) is alerted and requested to respond.

COMMUNICATION EQUIPMENT

A telephone is located on the north side of the TA-55-0355 Pad and within the High Energy Neutron Counter (HENC) unit. The facilities public address (PA) system can be heard from the TA-55-0355 Pad.

Description of General Capabilities:

A telephone for internal and external communication is available for use by any employee. Employees can be notified of an emergency situation and appropriate response action through the PA system.

No fire alarm pull station is located at the TA-55-0355 Pad. The nearest fire alarm pull box is located outside of PF-4 on the south dock. In case of a fire, notification will be made via telephone.

Description of General Capabilities:

Manually-operated fire alarms may be activated by any employee in the event of a fire to alert site personnel, LANL Emergency Response Personnel, and the LAFD.

Fire and PA system alarms are located throughout the facility.

Description of General Capabilities:

The fire and PA system are activated or used to provide a sound signal to alert personnel of fires or the need to clear the area.

DECONTAMINATION EQUIPMENT

An eyewash station and any applicable Safety Data Sheets (SDSs) are available at the TA-55-0355 Pad or at the Operation Support Building. SDS information is maintained where appropriate for personnel accessibility and is used for chemicals that will be needed to support operations or emergency activities.

Description of General Capabilities:

The eyewash may be used by personnel who receive a chemical splash to the eyes. Specific SDSs should be reviewed prior to working with chemicals. No free liquids will be stored on the Pad.

PERSONAL PROTECTIVE EQUIPMENT

Personnel at the TA-55-0355 Pad will be required to use appropriate PPE to protect themselves from hazards found under normal conditions. This PPE may include gloves, steel toe shoes, and eye protection. Additional PPE may be required during unusual hazardous situations. First aid kits and hearing protection will also be available.

Description of General Capabilities:

To prevent undue exposure of personnel to hazardous or mixed waste, PPE appropriate for the waste containers being managed will be worn by all on-site personnel at the TA-55-0355 Pad. First aid kits are available and may be used by personnel who sustain minor injuries at the unit in the course of operations. Hearing protection may be used by operations personnel to mitigate noise impacts.

OTHER:

If transportation is needed for evacuation, vehicles may be obtained through the Emergency Management and Response Group.

ATTACHMENT J

HAZARDOUS WASTE MANAGEMENT UNITS

Unit Identifier	Process Codes	Operating Capacity	General Information	Type of Unit
			Total square footage – 4,060	
TA-54-38 West Outdoor Pad	S01	29,160 gal	Includes loading dock and Pad surrounding Total square footage – 37,900	Outdoor (not associated with a regulated unit)
TA-54-38 West Outdoor Pad	S01	13,410 gal	Excess storage capacity Included in total square footage above	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, B13	S01	4,950 gal	Located in basement Non-liquid wastes only Total square footage – 495.83	Indoor
TA-55-4, G12	S01	5,225 gal	Located in basement Non-liquid wastes only Total square footage – 512.98	Indoor
TA-55-4, Vault	S01	4,000 gal	Located in basement	Indoor

Unit Identifier	Process Codes	Operating Capacity	General Information	Type of Unit
			Referred to as Area 6 Total square footage – 4,020	
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
TA-55-4-401 Mixed Waste Stabilization Unit	T04	Treatment - 150 gal / day	TA-55-4 Room 401 Total square footage – 4,500	Indoor
TA-55-4 Outdoor Pad	S01	135,000 gal	Located outside and west of TA-55-4 Includes building TA-55-PF-190 Total square footage – 11,100	Outdoor (not associated with a regulated unit)
TA-55-355 Pad	S01	84,370 gal	Includes canopy and pad Total square footage – 13,390	Outdoor (not associated with a regulated unit
TA-63 Transuranic Waste Facility	S01	105,875 gal	Includes TA-63-0149 through 0153 Storage Buildings, TA-63-0154 Storage and Characterization Building, TA-63-0155 through 0157 Characterization Trailers, and Outside Storage Pad Total square footage—79,239	Outdoor (not associated with a regulated unit)

ATTACHMENT N

FIGURES

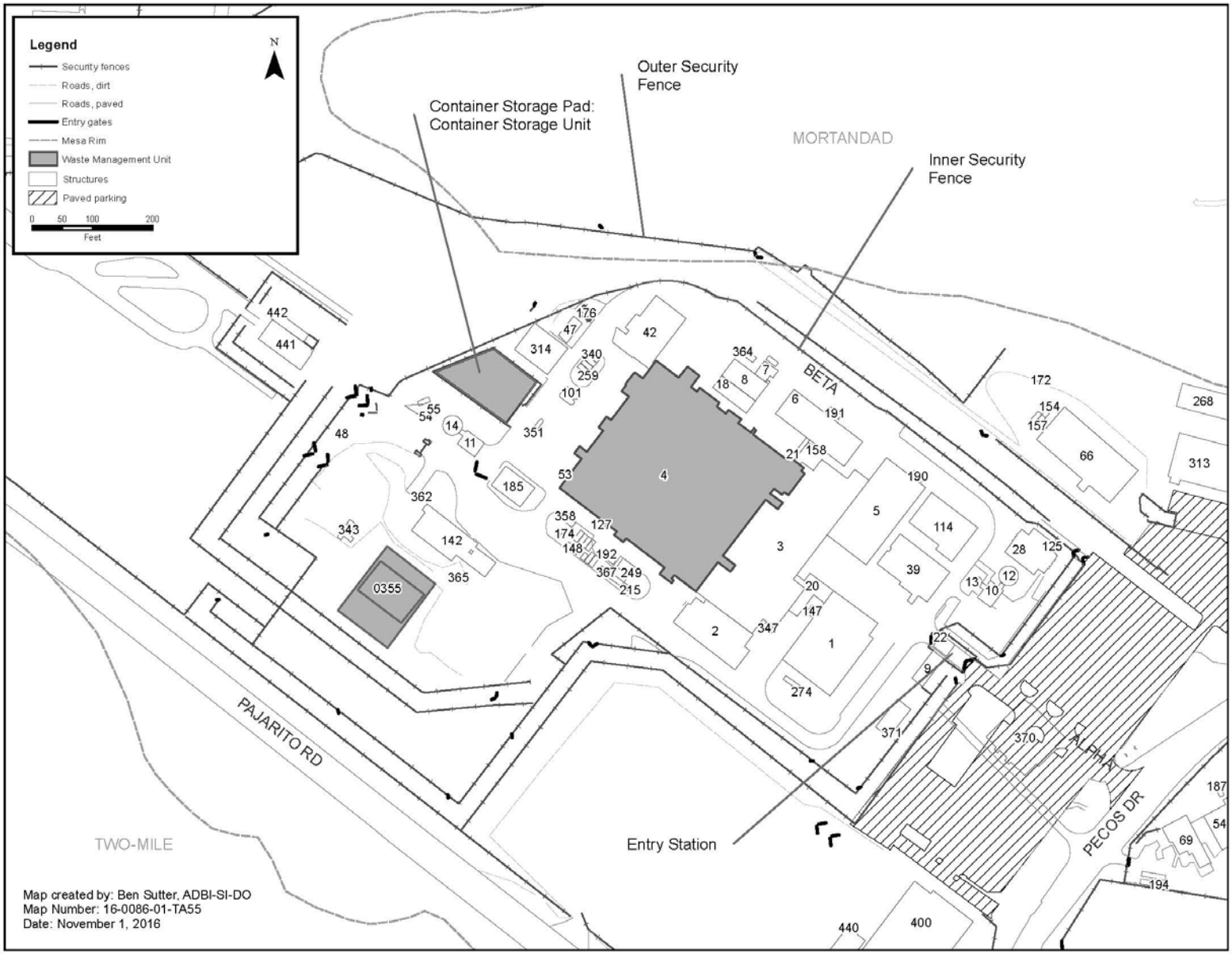


Figure 10
Technical Area (TA) 55 Location Map Showing Security Fences, Entry Gates, Entry Stations

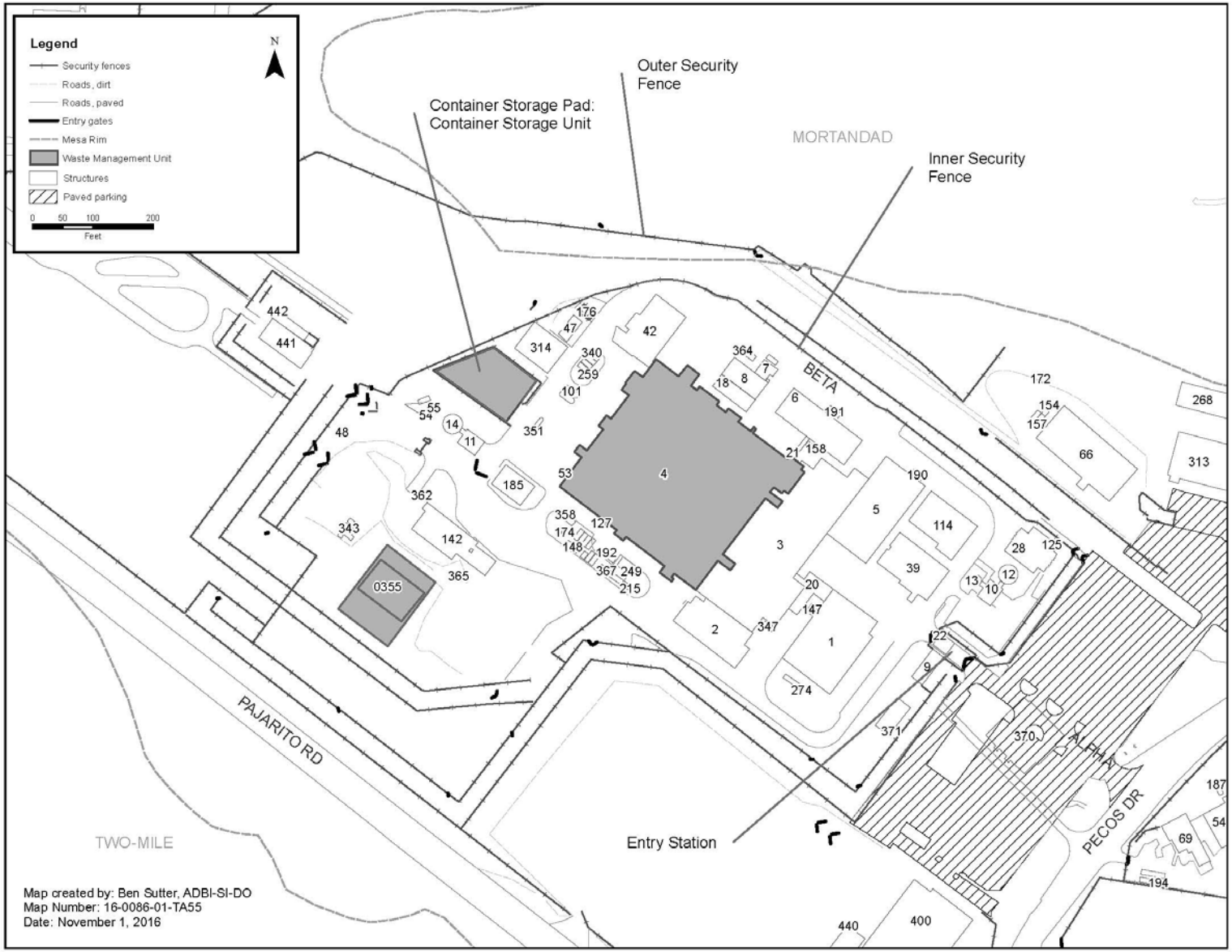


Figure 39
Technical Area (TA) 55, Building 4 Location Map

Figure 57 – TA-55, Building 4, Room B13

UCNI

LOS ALAMOS NATIONAL LABORATORY

THIS FIGURE CONTAINS UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION (UCNI) AS DEFINED BY SECTION 148 OF THE ATOMIC ENERGY ACT

Figure 58 – TA-55, Building 4, Room G12

UCNI

LOS ALAMOS NATIONAL LABORATORY

THIS FIGURE CONTAINS UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION (UCNI) AS DEFINED BY SECTION 148 OF THE ATOMIC ENERGY ACT

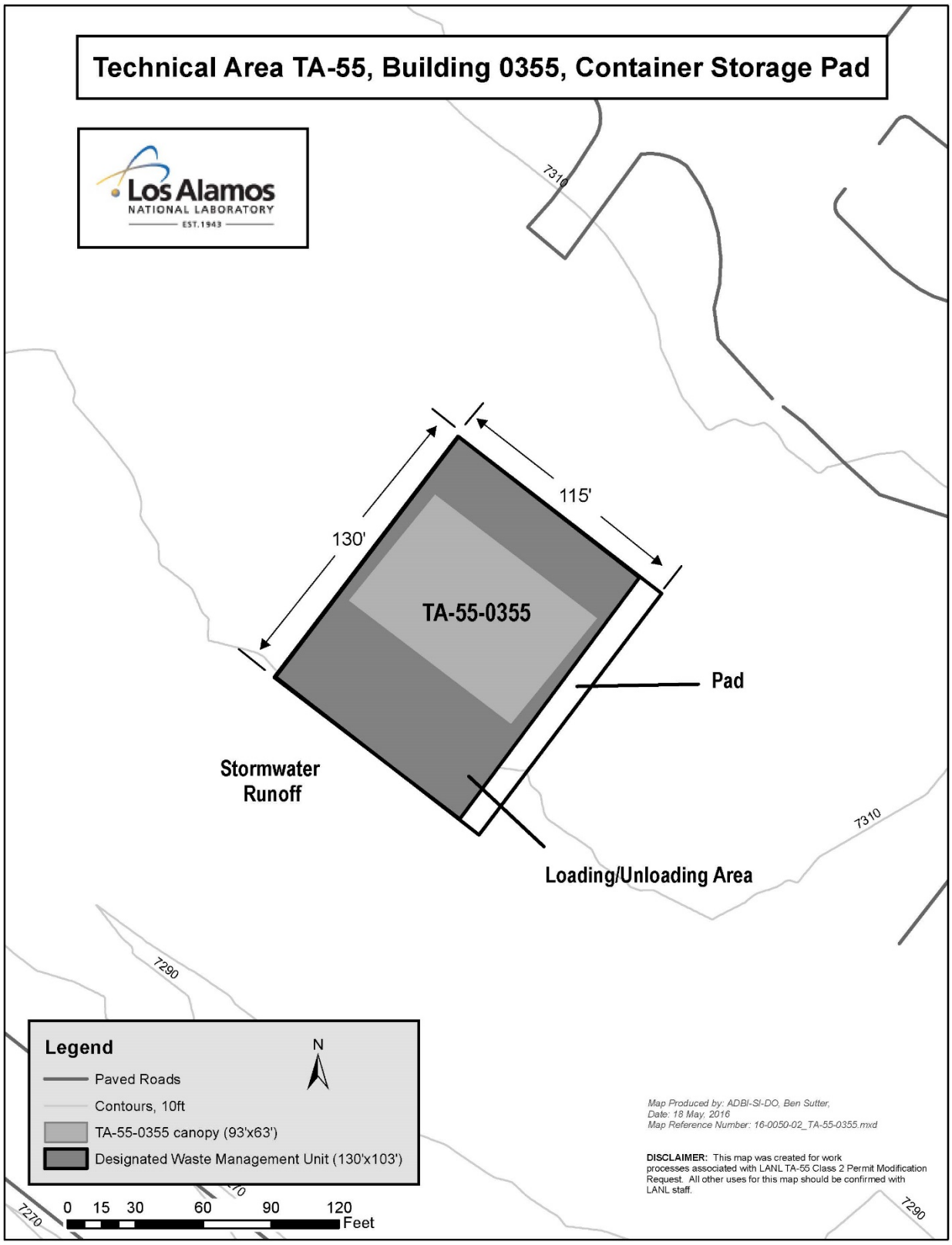


Figure 59
Technical Area (TA)-55-355 Pad

ATTACHMENT D

TA-55 CLOSURE PLANS

ATTACHMENT D

TA-55 CLOSURE PLANS

ATTACHMENT G.25
TECHNICAL AREA 55, BUILDING 0355 PAD
CLOSURE PLAN

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1.0 INTRODUCTION

This closure plan describes the activities necessary to close the outdoor hazardous waste container storage unit at the Technical Area 55-0355 Pad 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 container storage 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 TA-55-0355 Pad is located outside and south of the pad and TA-55-4. It is a concrete pad with a variable thickness of 4 to 6 inches, a steel roof structure with dimensions of approximately 93ft long and 63 ft wide. Two walls with roll up doors for wind prevention are located on the south and west sides of the canopy. The permitted unit boundary is approximately 130 ft long and 103 ft wide.

The TA-55-0355 Pad consists of one hazardous waste management unit that provides storage in containers for hazardous waste, including the hazardous component of mixed transuranic waste and potentially, mixed low-level waste streams. The TA-55-0355 Pad may also manage hazardous-only waste streams generated on site. A mobile High Efficiency Neutron Counter (HENC) system, three safes for the storage of calibration sources, and miscellaneous support equipment are currently located on the Pad.

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 further information about waste management procedures and hazardous waste constituents stored at the permitted unit.

3.0 ESTIMATE OF MAXIMUM WASTE STORED

To date, no hazardous waste has been stored at the permitted unit. Throughout the life of this Permit, it is estimated that 1,000 cubic meters 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 for container storage units.

Closure of the unit will be deemed complete when: 1) all structures and related 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.

4.2 Closure Schedule

This closure plan schedule is intended to address the closure requirements for the permitted unit within the authorized timeframe of the current Hazardous Waste Facility Permit (*see* Permit Section 9.4). The following section provides the schedule of closure activities (*see also* Table G.25-1 of this closure plan).

Notification of closure will occur at least 45 days before the Permittees expect to begin closure (*see* 40 CFR § 264.112(d)(1)) and closure activities will begin according to the requirements of 40 CFR § 264.112(d)(2). However, pursuant to 40 CFR §264.112(e), removing hazardous wastes and decontaminating or dismantling equipment in accordance with an approved closure plan may be conducted at any time before or after notification of closure. Notification of the structural assessment (assessment), as described in Section 5.2 of this closure plan, shall occur in accordance with Permit Section 9.4.6.2.

Within 90 days after the final receipt of hazardous waste, the permitted unit will be emptied of all stored waste. Within ten days of completing hazardous waste removal or within 100 days of the final receipt of hazardous waste, the Permittees will complete the records review (review) and assessment and submit an amended closure plan, if necessary, to the Department for review and approval as a permit modification in accordance with Permit Section 9.4.8. Upon approval of the modified closure plan, if applicable, the Permittees will decontaminate unit structures and related equipment.

After decontamination, soil sampling and decontamination verification sampling will be conducted to demonstrate that media and related equipment at the permitted unit meet the performance standards in Permit Section 9.2.

All closure activities, including submittal of a final closure certification report to the Department for review and approval, will be completed within 180 days after the final receipt of waste. In the event that closure of the permitted unit cannot proceed according to schedule, the Permittees will notify the Department in accordance with the extension request requirements in Permit Section 9.4.1.1.

5.0 CLOSURE PROCEDURES

Closure activities at the permitted unit will involve removal of hazardous wastes; proper management and disposal of hazardous waste residues and contaminated equipment associated with the permitted unit; and verification that the closure performance standards have been achieved. The following sections describe closure activities applicable to the permitted unit.

5.1 Removal of Waste

In accordance with Permit Section 9.4.2, all stored hazardous waste will be removed from the permitted unit scheduled for closure. Depending upon their size, containers will be removed with forklifts, container dollies, air pallets, or manually. Containers will be placed on flat bed trucks, trailers, or other appropriate vehicles for transport. Appropriate shipping documentation will accompany the wastes during transport. Containers holding hazardous waste will be moved to a permitted on-site storage unit or a permitted off-site treatment, storage, or disposal facility.

5.2 Records Review and Structural Assessment

After waste removal and before starting closure decontamination and sampling activities, the Facility Operating and Inspection Records for the permitted unit will be reviewed and an assessment will 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 Record (including 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 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 inspection of the concrete pad; metal canopy; and the floors, walls, and ceiling of the mobile HENC system 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 Equipment

In accordance with Permit Section 9.4.3, all remaining hazardous waste and hazardous waste residues will be removed from the permitted unit. The permitted unit's structures and 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*) and Facility waste management procedures.

5.3.1 Removal of Structures and Related Equipment

All 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. The entire concrete pad (including all materials associated with it such as any underlying base course or fill) will be removed after the structural assessment.

5.3.2 Decontamination of Structures and Related Equipment

All structures and equipment that will be reused by the Facility will be decontaminated in accordance with Permit Section 9.4.3.1. At this time there is no equipment that is expected to be reused; however, if equipment or structures are identified during the assessment they will be decontaminated in accordance with this section. Decontamination of structures and equipment will be steam cleaned using water or pressure washed with a solution consisting of a surfactant detergent (*e.g.*, Alconox®) and water. Portable berms, other devices (*e.g.*, absorbent socks, plastic sheeting, wading pools, existing secondary containment) will collect excess water and provide containment during the decontamination process.

5.3.3 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.25-2 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 closure sampling and analysis 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 to verify that soils, structures, 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. In compliance with Permit Section 9.4.7.1.ii, this closure plan will ensure the collection of 27 soil samples from the following locations:

a. Sampling within the known loading area as illustrated in Figure G.25-1 (*see* Permit Section 9.4.7.1.ii (1));

b. one soil sample every 900 square feet of the permitted unit for a total of 6 samples (*see* Permit Section 9.4.7.1.ii (2)); and

c. three samples to address stormwater runoff (*see* Permit Section 9.4.7.1.ii (3)).

Figure G.25-1 illustrates these sampling locations.

At the time of sampling, the precise locations of the grid samples will be randomly selected within each 900 square foot sampling box (*see* Figure G.25-1). These locations will be determined by applying a sub-grid of potential sampling points and randomly choosing one. If the review or assessment determines the need to obtain additional samples collected within the area of the sampling box (*e.g.*, at concrete cracks), these sample collection locations will be in addition to the grid sample locations.

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 incorporating guidance from the United States Environmental Protection Agency (USEPA) (EPA, 1986 and EPA, 2002), DOE (DOE, 1995), and other Department-approved procedures.

6.2.1 Soil and Sediment Sampling

Soil samples will be collected and analyzed to determine if hazardous constituents are present in the soil beneath the permitted unit. Soil samples will be collected using a spade, scoop, auger, or trowel or other equipment as specified in approved methods for the type of analytes and from appropriate depths as directed in Permit Section 9.4.7.1.ii (*i.e.*, EPA 1996 or 2002). 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.25-3.

6.2.2 Wipe Sampling

Surface wipe samples will be collected and analyzed to determine if residual hazardous constituents remain on the structures, surfaces, or 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 Cleaning of Sampling Equipment

Reusable sampling equipment will be cleaned and rinsed prior to use. Sampling equipment rinsate blanks will be collected and analyzed only if reusable sampling equipment is used. Reusable decontamination equipment, including protective clothing and tools, used during closure activities will be scraped as necessary to remove residue and cleaned with a wash water solution. Sampling equipment will be cleaned prior to each use with a wash solution, rinsed several times with tap water, and air-dried to prevent cross-contamination of samples. A disposable sampler is considered clean if still in a factory-sealed wrapper.

6.3 Sample Management Procedures

The following sections provide a description of sample documentation, handling, preservation, storage, and sample packaging, and transportation requirements that will be followed during the sampling activities associated with the closure.

6.3.1 Sample Documentation

Sampling personnel will complete and maintain records to document sampling and analysis activities. Sample documentation will include sample identification numbers, chain-of-custody forms, analysis requested, sample logbooks detailing sample collection activities, and shipping forms (if necessary).

6.3.1.1 Chain-of-Custody

Chain-of-custody forms will be maintained by sampling personnel until the samples are relinquished to the analytical laboratory. This will ensure the integrity of the samples and provide for an accurate and defensible written record of the sampling possession and handling from the time of collection until laboratory analysis. One chain-of-custody form may be used to document all of the samples collected from a single sampling event. The sample collector will be responsible for the integrity of the samples collected until properly transferred to another person. The EPA considers a sample to be in a person's custody if it is:

a. in a person's physical possession;

b. in view of the person in possession; or

c. secured by that person in a restricted access area to prevent tampering.

The sample collector will document all pertinent sample collection data. Individuals relinquishing or receiving custody of the samples will sign, date, and note the time on the analysis request and chain-of-

custody form. A chain-of-custody form must accompany all samples from collection through laboratory analysis. The analytical laboratory will return the completed chain-of-custody form to the Facility and it will become part of the permanent sampling record documenting the sampling efforts.

6.3.1.2 Sample Labels and Custody Seals

A sample label will be affixed to each sample container. The sample label will include the following information:

a. a unique sample identification number;

b. name of the sample collector;

c. date and time of collection;

d. type of preservatives used, if any; and

e. location from which the sample was collected.

A custody seal will be placed on each sample container to detect unauthorized tampering with the samples. These labels must be initialed, dated, and affixed by the sample collector in such a manner that it is necessary to break the seal to open the container.

6.3.1.3 Sample Logbook

All pertinent information on the sampling effort must be recorded in a bound logbook. Information must be recorded in ink and any cross outs must be made with a single line with the change initialed and dated by the author. The sample logbook will include the following information:

a. the sample location;

b. suspected composition;

c. sample identification number;

d. volume/mass of sample taken;

e. purpose of sampling;

f. description of sample point and sampling methodology;

g. date and time of collection;

h. name of the sample collector;

i. sample destination and how it will be transported;

j. observations;

k. name(s) of personnel responsible for the observations; and

l. any deviations and supporting information.

6.3.2 Sample Handling, Preservation, and Storage

Samples will be collected and containerized in appropriate pre-cleaned sample containers. Table G.25-3 presents the requirements in *SW-846* (EPA, 1986) for sample containers, preservation techniques, and holding times. Samples that require cooling to 4 degrees Celsius will be placed in a cooler with ice or ice gel or in a refrigerator immediately upon collection.

6.3.3 Packaging and Transportation of Samples

All packaging and transportation activities will meet safety expectations, QA requirements, DOE Orders, and relevant local, state, and federal laws (including 10 CFR and 49 CFR). Appropriate Facility documents establish the requirements for packaging design, testing, acquisition, acceptance, use, maintenance, and decommissioning and for on-site, intra-site, and off-site shipment preparation and transportation of general commodities, hazardous materials, substances, waste, and defense program materials.

Off-site transportation of samples will occur via private, contract, or common motor carrier, air carrier, or freight. All off-site transportation will be processed through the Facility packaging and transportation organization, unless the shipper is specifically authorized through formal documentation by that organization to independently tender shipments to common motor or air carriers.

6.4 Sample Analysis Requirements

Samples will be analyzed for all hazardous constituents listed in Appendix VIII of 40 CFR Part 261 and in Appendix IX of 40 CFR Part 264 that have been stored at the permitted unit over its operational history. Samples will be analyzed by an independent laboratory using the methods outlined in Table G.25-4. Analytes, test methods and instrumentation, target detection limits, and rationale for metals and organic analyses are presented in Table G.25-4. If any of the information from these tables has changed at the time of closure, the Permittees will amend this closure plan to update all methods in this SAP.

6.4.1 Analytical Laboratory Requirements

The analytical laboratory will perform the detailed qualitative and quantitative chemical analyses specified in Section 6.4.2 of this closure plan. The analytical laboratory will have:

a. a documented comprehensive QA/QC program;

b. technical analytical expertise;

c. a document control/records management plan; and

d. the capability to perform data reduction, validation, and reporting.

The selection of the analytical testing methods identified in Table G.25-4 is based on the following considerations:

e. the physical form of the waste;

f. constituents of concern;

g. required detection limits (*e.g.*, regulatory thresholds); and

h. information requirements (*e.g.*, waste classification).

6.4.2 Quality Assurance/Quality Control

All sampling and analysis will be conducted in accordance with QA/QC procedures defined by the latest revision of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (*SW-846*) (EPA, 1986) or other Department-approved procedures. Field sampling procedures and laboratory analyses will be evaluated through the use of QA/QC samples to assess the overall quality of the data produced. QC samples evaluate precision, accuracy, and potential sample contaminations associated with the sampling and analysis process and are described in the following sections, along with information on calculations necessary to evaluate the QC results.

6.4.2.1 Field Quality Control

The field QC samples that will be collected are trip blanks, field blanks, field duplicates, and equipment rinsate blanks. Table G.25-5 presents a summary of QC sample types, applicable analyses, frequency, and acceptance criteria. QC samples will be given a unique sample identification number and submitted to the analytical laboratory as blind samples. QC samples will be identified on the applicable forms so that the results can be applied to the associated sample.

6.4.2.2 Analytical Laboratory QC Samples

QA/QC considerations are an integral part of analytical laboratory operations. Laboratory QA ensures that analytical methods generate data that are technically sound, statistically valid, and that can be documented. QC procedures are the tools employed to measure the degree to which these QA objectives are met.

6.4.3 Data Reduction, Verification, Validation, and Reporting

Analytical data generated by the activities described in this closure plan will be verified and validated. Data reduction is the conversion of raw data to reportable units, transfer of data between recording media, and computation of summary statistics, standard errors, confidence intervals, and statistical tests.

6.4.4 Data Reporting Requirements

Analytical results will include all pertinent information about the condition and appearance of the sample-as-received. Analytical reports will include:

a. a summary of analytical results for each sample;

b. results from QC samples such as blanks, spikes, and calibrations;

c. reference to standard methods or a detailed description of analytical procedures; and

d. raw data printouts for comparison with summaries.

The laboratory will describe the analysis in sufficient detail so that the data user can understand how the sample was analyzed.

7.0 WASTE MANAGEMENT

All waste generated during closure will be controlled, handled, characterized, and disposed of in accordance Permit Section 9.4.5, Permit Attachment C (*Waste Analysis* Plan), and Facility waste management procedures. Closure activities may generate different types of waste materials; these wastes are listed with potential disposal options in Table G.25-2 of this closure plan. Subsequent disposition options for the decontaminated structures and equipment include reuse, recycling, or disposal. Reusable protective clothing, tools, and equipment used during decontamination will be cleaned with a wash water solution. Disposable equipment and other small equipment that cannot be decontaminated, as summarized in Table G.25-2, will be containerized and managed as waste.

8.0 CLOSURE CERTIFICATION REPORT

Upon completion of the closure activities at the permitted unit, a closure certification report will be prepared and submitted to the Department for review and approval in accordance with Permit Section 9.5.

9.0 REFERENCES

DOE, 1995. "DOE Methods for Evaluating Environmental and Waste Management Samples," DOE/EM-0089T, Rev. 2. Prepared for the U.S. Department of Energy by Pacific Northwest Laboratory, Richland, Washington.

EPA, 1986 and all approved updates. “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA-*SW-846*, U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, U.S. Government Printing Office, Washington, D.C.

EPA, 2002. "RCRA Waste Sampling Draft Technical Guidance Planning, Implementation, and Assessment," EPA530-D-02-002, August 2002, Office of Solid Waste, U.S. Environmental Protection Agency, Washington, DC.

LANL, 1999. “Screening Level Ecological Risk Assessment Methods,” LA-UR-99-1406, Los Alamos National Laboratory, Los Alamos, New Mexico.

NIOSH, 1994. The National Institute for Occupational Health and Safety (NIOSH) *Manual of Analytical Methods*, 4th ed. Issue 1. 1994.

NMED, 2006. “Technical Background Document for Development of Soil Screening Levels,” Rev. 4.0, June 2006, New Mexico Environment Department, Santa Fe, New Mexico.

Table G.25-1
Closure Schedule for the Technical Area 55-0355 Pad

Activity		Maximum Time Required
Notify the Department of intent to close.		-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

Table G.25-2
Potential Waste Materials, Waste Types, and Disposal Options

Potential Waste Materials	Waste Types	Disposal Options
Personal protective equipment (PPE)	Non-regulated solid waste	Subtitle D landfill
	Hazardous waste	The PPE will be treated to meet Land Disposal Restriction (LDR) treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its state analog, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or the Waste Isolation Pilot Plant (WIPP), as appropriate.
Decontamination wash water	Non-regulated liquid waste	Sanitary sewer
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Radioactive liquid waste	Radioactive Liquid Waste Treatment Facility (RLWTF)
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or WIPP, as appropriate.
Metal	Non-regulated solid waste	Subtitle D landfill or recycled
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its state analog, or an authorized off-site radioactive waste disposal

Table G.25-2
Potential Waste Materials, Waste Types, and Disposal Options

Potential Waste Materials	Waste Types	Disposal Options
		facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, or WIPP, as appropriate.
Discarded waste management equipment	Non-regulated solid waste	Subtitle D landfill
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its state analog, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or WIPP, as appropriate.
Sampling equipment	Non-regulated solid waste	Subtitle D landfill
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its state analog, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or WIPP, as appropriate.
Concrete	Non-regulated solid waste	Subtitle D landfill or potentially, as included in corrective action activities at Area G.

Table G.25-2

Potential Waste Materials, Waste Types, and Disposal Options

Potential Waste Materials	Waste Types	Disposal Options
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its state analog, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or WIPP, as appropriate.

Table G.25-3

Sample Containers[a], Preservation Techniques, and Holding Times[b]

Analyte Class and Sample Type	Container Type and Materials	Preservation	Holding Time
Metals			
TCLP/Total Metals: Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver	Aqueous Media: 500-mL Wide Mouth-Polyethylene or Glass with Teflon Liner	Aqueous Media: HNO_3 to pH <2 Cool to 4 °C	180 Days
	Solid Media: 125-mL Glass	Solid Media: Cool to 4 °C	
TCLP/Total Mercury	Aqueous Media: 500-mL Wide Mouth-Polyethylene or Glass with Teflon Liner	Aqueous Media: HNO_3 to pH <2 Cool to 4 °C	28 Days
	Solid Media: 125-mL Glass	Solid Media: Cool to 4 °C	
Volatile Organic Compounds			
Target Compound Volatile Organic Compounds	Aqueous Media: Two 40-mL Amber Glass Vials with Teflon-Lined Septa	Aqueous Media: HCl to pH<2 Cool to 4 °C	14 days
	Solid Media: 125-mL Glass or Two 40-mL Amber Glass Vials with Teflon-Lined Septa	Solid Media Cool to 4 °C Add 5 mL Methanol or Other Water Miscible Organic Solvent to 40-mL Glass Vials	
Semi-Volatile Organic Compounds			
Target Compound Semi-volatile Organic Compounds	Aqueous Media: Four 1-L Amber Glass with Teflon-Lined Lid	Aqueous Media: Cool to 4 °C	Seven days from field collection to preparative extraction. 40 days from preparative extraction to determinative analysis.
	Solid Media: 250-mL Glass	Solid Media: Cool to 4 °C	

[a] Smaller sample containers may be required due to health and safety concerns associated with potential radiation exposure, transportation requirements, and waste management considerations.

[b] Information obtained from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," *SW-846*, U.S. Environmental Protection Agency, 1986 and all approved updates.

°C = degrees Celsius HNO_3 = nitric acid HCl = hydrochloric acid L = Liter mL = milliter
TCLP = Toxicity Characteristic Leaching Procedure

Table G.25-4

Summary of Analytical Methods

Analyte	EPA *SW-846* Analytical Method [a]	Test Methods/ Instrumentation	Target Detection Limit [b]	Rationale
Metal Analysis				
Arsenic	6010, 7010, 7061A	ICP-AES, GFAA, CVAA	10 ug/L	Determine the metals concentration in the samples.
Barium	6010, 7010	ICP-AES,GFAA	200 ug/L	
Cadmium	6010, 7010	ICP-AES, GFAA	2 ug/L	
Chromium	6010, 7010	ICP-AES, GFAA	10 ug/L	
Lead	6010, 7010	ICP-AES, GFAA	5 ug/L	
Mercury	6010, 7470A, 7471B	ICP-AES, CVAA	0.2 ug/L	
Selenium	6010, 7010, 7741A	ICP-AES, GFAA, CVAA	5 ug/L	
Silver	6010, 7010	ICP-AES, GFAA	10 ug/L	
Organic Analysis				
Target compound list VOCs plus ten tentatively identified compounds (TIC)	8260B	GC/MS	10 mg/L	Determine the VOCs concentration in the samples.
Target compound list SVOCs plus 20 TICs	8270D, 8275	GC/MS	10 mg/L	Determine the SVOCs concentration in the samples.

[a] U.S. Environmental Protection Agency (EPA), 1986 and all approved updates, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," *SW-846*.

[b] Detection limits listed for metals are for clean water. Detection limits for organics are expressed as practical quantitation limits. Actual detection limits may be higher depending on sample composition and matrix type.

CVAA = Cold-vapor atomic absorption spectroscopy
FLAA = Flame atomic absorption spectroscopy
GC/MS = Gas chromatography/mass spectrometry
GFAA = Graphite furnace atomic absorption spectroscopy
ICP-AES = Inductively coupled plasma-atomic emission spectrometry
mg/L = milligrams per liter ug/L = micrograms per liter.

Table G.25-5

Recommended Quality Control Sample Types, Applicable Analyses, Frequency, and Acceptance Criteria

QC Sample Type	Applicable Analysis [a]	Frequency	Acceptance Criteria
Trip Blank	VOC	One set per shipping cooler containing samples to be analyzed for VOCs	Not Applicable
Field Blank	VOC/SVOC, metals	One sample daily per analysis	Not Applicable
Field Duplicate	Chemical	One for each sampling sequence	Relative percent difference less than or equal to 20 percent
Equipment Rinsate Blank[b]	VOC/SVOC, metals	One sample daily	Not Applicable

[a] For VOC and SVOC analysis, if blank shows detectable levels of any common laboratory contaminant (*e.g.*, methylene chloride, acetone, 2-butanone, toluene, and/or any phthalate ester), sample must exhibit that contaminant at a level 10 times the quantitation limit to be considered detectable. For all other contaminants, sample must exhibit the contaminant at a level 5 times the quantitation level to be considered detectable.

[b] Collected only if reusable sampling equipment used.

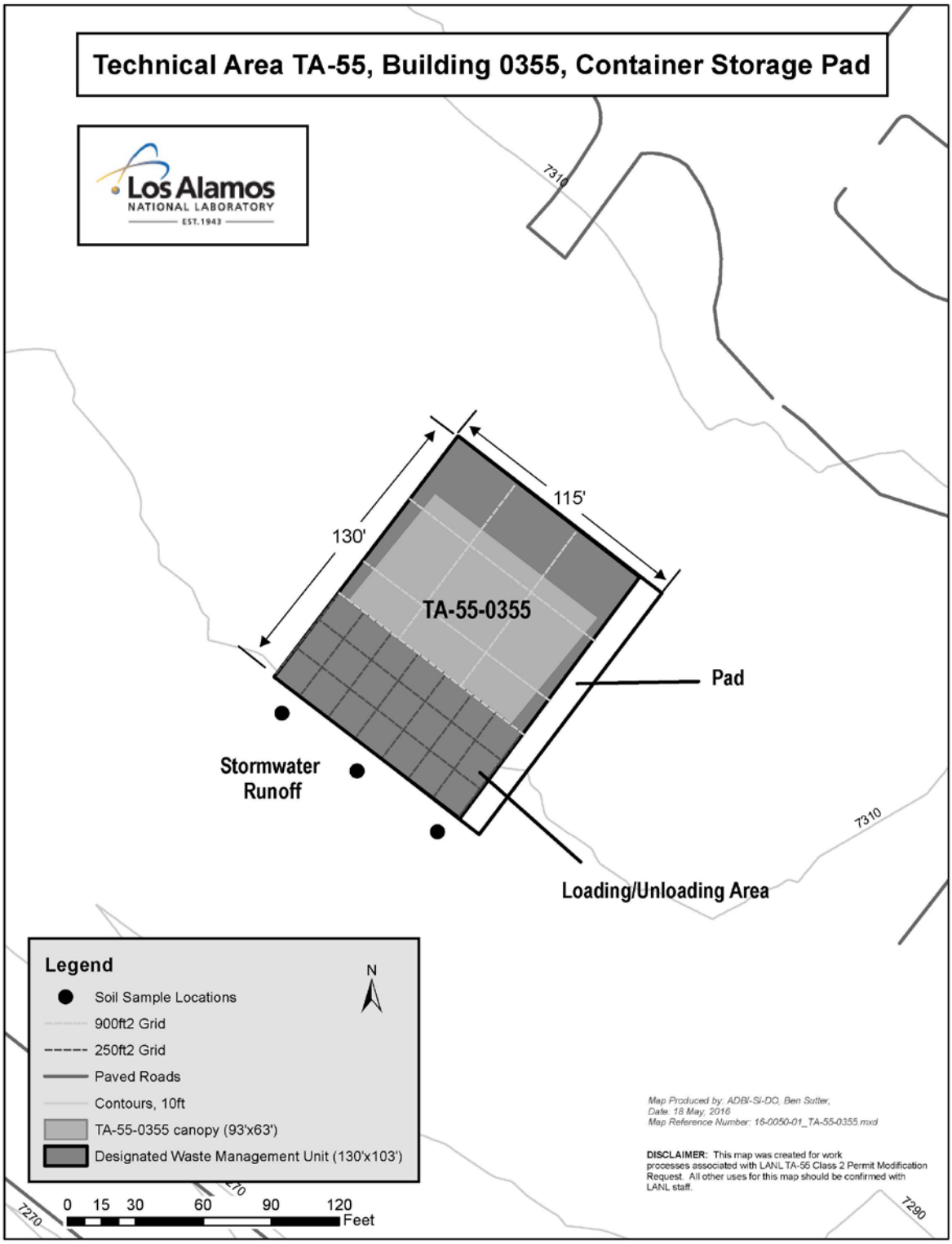

Figure G.25-1: Technical Area 55-0355 Pad, Unit Grid Sampling and Additional Sampling Locations

ATTACHMENT G.29
TECHNICAL AREA 55, BUILDING 4 ROOM B13
INDOOR CONTAINER STORAGE UNIT
CLOSURE PLAN

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1.0 INTRODUCTION

This closure plan describes the activities necessary to close the indoor hazardous waste container storage unit which is located in Room B13 in the basement of Technical Area 55, Building 4 (TA-55-4) 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 entire floor of the permitted unit has been used for storage of hazardous waste. This storage room is approximately 8 ft high, 17 ft, 6 in. wide and 28 ft, 4 in. long. The maximum storage capacity of this unit is 4,950 gal or the equivalent of 90 - 55 gal drums. The types of waste containers holding hazardous or mixed waste that are stored in B13 include 30, 55, 85 gal drums and solid waste boxes. No containers with free liquids will be stored in the unit, so secondary containment will not be necessary.

The waste stored at the permitted unit consists of hazardous and mixed waste in solid form. The permitted unit was constructed in 1979, where the unit now resides. 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 regarding waste management procedures and hazardous waste constituents stored at the permitted unit.

3.0 ESTIMATE OF MAXIMUM WASTE STORED

To date, no hazardous waste has been stored at the permitted unit. Throughout the life of this Permit, it is estimated that an additional 1,000 cubic meters of waste will be stored in the permitted unit.

4.0 GENERAL CLOSURE REQUIREMENTS

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 for container storage units.

Closure of the permitted unit will be deemed complete when: 1) all 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.

4.2 Closure Schedule

This closure plan schedule is intended to address the closure requirements for the permitted unit within the authorized timeframe of the current Hazardous Waste Facility Permit (*see* Permit Section 9.4). The following section provides the schedule of closure activities (*see also* Table G.29-1 of this closure plan).

Notification of closure will occur at least 45 days before the Permittees expect to begin closure (*see* 40 CFR § 264.112(d)(1)) and closure activities will begin according to the requirements of 40 CFR § 264.112(d)(2). However, pursuant to 40 CFR §264.112(e), removing hazardous wastes and decontaminating or dismantling equipment in accordance with an approved closure plan may be conducted at any time before or after notification of closure. Notification of the structural assessment (assessment), as described in Section 5.2 of this closure plan, shall occur in accordance with Permit Section 9.4.6.2.

Within 90 days after the final receipt of hazardous waste, the permitted unit will be emptied of all stored waste. Within ten days of completing hazardous waste removal or within 100 days of the final receipt of hazardous waste the Permittees will complete the records review (review) and assessment and submit an amended closure plan, if necessary, to the Department for review and approval as a permit modification in accordance with Permit Section 9.4.8. Upon approval of the modified closure plan, if applicable, the Permittees will decontaminate unit surfaces and related equipment.

Decontamination verification sampling activities, and soil sampling if applicable, will be conducted to demonstrate that surfaces, related equipment, and media, if applicable, at the permitted unit meet the closure performance standards in Permit Section 9.2.

All closure activities, including submittal of a final closure certification report to the Department for review and approval, will be submitted to the Department within 180 days after the final receipt of waste. In the event that closure of the permitted unit cannot proceed according to schedule, the Permittees will notify the Department in accordance with the extension request requirements in Permit Section 9.4.1.1.

5.0 CLOSURE PROCEDURES

Closure activities at the permitted unit will include: removal of hazardous wastes; proper management and disposal of hazardous waste residues and contaminated surfaces and equipment associated with the permitted unit; verification that the closure performance standards in Permit Section 9.2 have been achieved; and submittal of a final closure certification report. The following sections describe closure activities applicable to the permitted unit.

5.1 Removal of Waste

In accordance with Permit Section 9.4.2, all stored hazardous wastes will be removed from the permitted unit scheduled for closure. Depending upon their size, containers will be removed with forklifts, container dollies, air pallets, or manually. Containers will be placed on flat bed trucks, trailers, or other appropriate vehicles for transport. Appropriate shipping documentation will accompany the wastes during transport. Containers holding hazardous wastes will be moved to a permitted on-site storage unit or a permitted off-site treatment, storage, or disposal facility.

5.2 Records Review and Structural Assessment

After waste removal and before starting closure decontamination and sampling activities, the Facility Operating Record, including inspection records, for the permitted unit will be reviewed and an assessment will 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 Record shall be reviewed in accordance with 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 floor and walls of the permitted unit 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 Related 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 surfaces and related equipment will be decontaminated, or 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. Decontamination activities will ensure the removal of all hazardous waste residues and hazardous constituents from the permitted unit to meet the closure performance standards outlined in Permit Section 9.2.

5.3.1 Removal of Structures and Related Equipment

All surfaces 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. Table G.29-2 outlines the potential waste materials, waste types, and disposal options.

5.3.2 Decontamination of Structures and Related Equipment

All surfaces, structures, and related equipment that will be left in place or reused by the Facility will be decontaminated in accordance with Permit Section 9.4.3.1. Decontamination of the permitted unit's surfaces will include all features located within the unit. There is currently no equipment located at the permitted unit that is expected to be left in place; however, if equipment identified during the assessment is expected to be left in place, it will be decontaminated in accordance with this section.

Decontamination of the permitted unit will be conducted by first removing loose material (*e.g.*, dust, dirt) through sweeping followed by washing using a manual wipe-down method with a solution consisting of a surfactant detergent (*e.g.*, Alconox®) and water mixed in accordance with the manufacturer's recommendations.

Wipe-down washing will be utilized because of the need to minimize the potential for exposure to workers and the migration of cleaning solution to other areas of the basement outside the permitted unit's boundary. Migration of the wash solution (in the form of splashing, condensation, or drainage) from steam cleaning or pressure washing may potentially contaminate or otherwise negatively affect ongoing operations within the basement. Migration can potentially be mitigated using plastic barriers taped to surfaces to enclose the area. However, areas enclosed in this manner will require workers to use additional personal protective equipment (PPE). This PPE will include fully enclosed protective wear and supplied air because of the increased risk of exposure to personnel due to potential release of radiological materials and organic compounds and concentration within the enclosure. Enclosure of the area increases the risk of personnel exhaustion, because of the additional PPE, and the potential for workers to reach radiological work exposure limits. Therefore, wipe-down washing, rather than steam cleaning or pressure washing, will be utilized because of the need to minimize the potential for exposure to workers and the migration of cleaning solution to other areas of the basement outside the permitted unit's boundary.

The entirety of the unit's floors will be decontaminated. To ensure that decontamination of the walls is conducted to a sufficient height, all walls in the permitted unit will be decontaminated to a height of 8 feet.

The ceilings of this permitted unit is 8 feet tall and will be decontaminated. 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 waste was stored in the permitted unit, or a spill or release occurred within the permitted unit that could have affected the surrounding areas.

Cloths, or other absorbent cleaning devices, will not be reused to wipe down the surfaces after being wetted in the wash solution or after spraying solution onto the surfaces. Only one cloth or absorbent cleaning device will be used at a time in a single area to prevent cross-contamination. To minimize the amount of liquid waste generated as a result of decontamination activities, the wash solution will be dispersed from buckets, spray bottles, or other types of small containers.

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.

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.29-2 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 closure sampling and analysis 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 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 at least one wipe sample from the floor and from each wall (up to 8 feet) of the permitted unit. A total of 5 wipe samples will be collected: one from the floor; one from each of the four walls.

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 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.

6.2.2 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.29-3.

6.2.3 Cleaning of Sampling Equipment

Reusable sampling equipment will be cleaned and rinsed prior to use. Sampling equipment rinsate blanks will be collected and analyzed only if reusable sampling equipment is used. Reusable decontamination equipment, including protective clothing and tools, used during closure activities will be scraped as necessary to remove residue and cleaned with a wash water solution. Sampling equipment will be cleaned prior to each use with a wash solution, rinsed several times with tap water, and air-dried to prevent cross-contamination of samples. A disposable sampler is considered clean if still in a factory-sealed wrapper.

6.3 Sample Management Procedures

The following sections provide a description of sample documentation, handling, preservation, storage, packaging, and transportation requirements that will be followed during the sampling activities associated with the closure.

6.3.1 Sample Documentation

Sampling personnel will complete and maintain records to document sampling and analysis activities. Sample documentation will include sample identification numbers, chain-of-custody forms, analysis requested, sample logbooks detailing sample collection activities, and shipping forms (if necessary).

6.3.1.1 Chain-of-Custody

Chain-of-custody forms will be maintained by sampling personnel until samples are relinquished to the analytical laboratory. This will ensure the integrity of the samples and provide for an accurate and defensible written record of the sampling possession and handling from the time of collection until laboratory analysis. One chain-of-custody form may be used to document all of the samples collected from a single sampling event. The sample collector will be responsible for the integrity of the samples collected until properly transferred to another person. The EPA considers a sample to be in a person's custody if it is:

a. in a person's physical possession;

b. in view of the person in possession; or

c. secured by that person in a restricted access area to prevent tampering.

The sample collector will document all pertinent sample collection data. Individuals relinquishing or receiving custody of the samples will sign, date, and note the time on the analysis request and chain-of-custody form. A chain-of-custody form must accompany all samples from collection through laboratory analysis. The analytical laboratory will return the completed chain-of-custody form to the Facility and it will become part of the permanent sampling record documenting the sampling efforts.

6.3.1.2 Sample Labels and Custody Seals

A sample label will be affixed to each sample container. The sample label will include the following information:

a. a unique sample identification number;

b. name of the sample collector;

c. date and time of collection;

d. type of preservatives used, if any; and

e. location from which the sample was collected.

A custody seal will be placed on each sample container to detect unauthorized tampering with the samples. These labels must be initialed, dated, and affixed by the sample collector in such a manner that it is necessary to break the seal to open the container.

6.3.1.3 Sample Logbook

All pertinent information on the sampling effort must be recorded in a bound logbook. Information must be recorded in ink and any cross-outs must be made with a single line with the change initialed and dated by the author. The sample logbook will include the following information:

a. the sample location;

b. suspected composition;

c. sample identification number;

d. volume/mass of sample taken;

e. purpose of sampling;

f. description of sample point and sampling methodology;

g. date and time of collection;

h. name of the sample collector;

i. sample destination and how it will be transported;

j. observations;

k. name(s) of personnel responsible for the observations; and

l. any deviations and supporting information

6.3.2 Sample Handling, Preservation, and Storage

Samples will be collected and containerized in appropriate pre-cleaned sample containers. Table G.29-3 presents the requirements in *SW-846* (EPA, 1986) for sample containers, preservation techniques, and holding times. Samples that require cooling to 4 degrees Celsius will be placed in a cooler with ice or ice gel or in a refrigerator immediately upon collection.

6.3.3 Packaging and Transportation of Samples

All packaging and transportation activities will meet safety expectations, QA requirements, DOE Orders, and relevant local, state, and federal laws (including 10 CFR and 49 CFR). Appropriate Facility documents establish the requirements for packaging design, testing, acquisition, acceptance, use, maintenance, and decommissioning and for on-site, intra-site, and off-site shipment preparation and transportation of general commodities, hazardous materials, substances, wastes, and defense program materials.

Off-site transportation of samples will occur via private, contract, or common motor carrier, air carrier, or freight. All off-site transportation will be processed through the Facility packaging and transportation organization unless the shipper is specifically authorized through formal documentation by the packaging and transportation organization to independently tender shipments to common motor or air carriers.

6.4 Sample Analysis Requirements

Samples will be analyzed for all hazardous constituents listed in Appendix VIII of 40 CFR Part 261 and in Appendix IX of 40 CFR Part 264 that have been stored at the permitted unit over its operational history, which will be assessed prior to closure. Samples will be analyzed by an independent laboratory using the methods outlined in Table G.29-4. Analytes, test methods and instrumentation, target detection limits, and rationale for metals and organic analyses are presented in Table G.29-4. If any of the information in this

table has changed at the time of closure, the Permittees will amend this closure plan to update all methods in this SAP.

6.4.1 Analytical Laboratory Requirements

The analytical laboratory will perform the detailed qualitative and quantitative chemical analyses specified in Section 6.4.2. This analytical laboratory will have:

a. a documented comprehensive QA/QC program;

b. technical analytical expertise;

c. a document control and records management plan; and

d. the capability to perform data reduction, validation, and reporting.

The selection of the analytical testing methods identified in Table G.29-4 is based on the following considerations:

e. the physical form of the waste;

f. constituents of concern;

g. required detection limits (*e.g.*, regulatory thresholds); and

h. information requirements (*e.g.*, waste classification).

6.4.2 Quality Assurance/Quality Control

All sampling and analysis will be conducted in accordance with QA/QC procedures defined by the latest revision of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (*SW-846*) (EPA, 1986) or other Department-approved procedures. Field sampling procedures and laboratory analyses will be evaluated through the use of QA/QC samples to assess the overall quality of the data produced. QC samples evaluate precision, accuracy, and potential sample contamination associated with the sampling and analysis process, and is described in the following sections, along with information on calculations necessary to evaluate the QC results.

6.4.2.1 Field Quality Control

The field QC samples that will be collected are trip blanks, field blanks, field duplicates, and equipment rinsate blanks. Table G.29-5 presents a summary of QC sample types, applicable analyses, frequency, and acceptance criteria. QC samples will be given a unique sample identification number and submitted to the analytical laboratory as blind samples. QC samples will be identified on the applicable forms so that the results can be applied to the associated sample.

6.4.2.2 Analytical Laboratory QC Samples

QA/QC considerations are an integral part of analytical laboratory operations. Laboratory QA ensures that analytical methods generate data that are technically sound, statistically valid, and that can be documented. QC procedures are the tools employed to measure the degree to which these QA objectives are met.

6.4.3 Data Reduction, Verification, Validation, and Reporting

Analytical data generated by the activities described in this closure plan will be verified and validated. Data reduction is the conversion of raw data to reportable units, transfer of data between recording media, and computation of summary statistics, standard errors, confidence intervals, and statistical tests.

6.4.4 Data Reporting Requirements

Analytical results will include all pertinent information about the condition and appearance of the sample-as-received. Analytical reports will include:

a. a summary of analytical results for each sample;

b. results from QC samples such as blanks, spikes, and calibrations;

c. reference to standard methods or a detailed description of analytical procedures; and

d. raw data printouts for comparison with summaries.

The laboratory will describe sample preparations that occur during the analysis in sufficient detail so that the data user can understand how the sample was analyzed.

7.0 WASTE MANAGEMENT

All waste generated during closure will be controlled, handled, characterized, and disposed of in accordance with Permit Section 9.4.5, Permit Attachment C (*Waste Analysis Plan*), and Facility waste management procedures. Closure activities may generate different types of waste materials; these wastes are listed with potential disposal options in Table G.29-2 of this closure plan. Subsequent disposition options for the decontaminated structures and equipment include reuse, recycling, or disposal. Reusable protective clothing, tools, and equipment used during decontamination will be cleaned with a wash water solution. Disposable equipment and other small equipment that cannot be decontaminated, as summarized in Table G.29-3, will be containerized and managed as waste.

8.0 CLOSURE CERTIFICATION REPORT

Upon completion of the closure activities at the permitted unit, a closure certification report will be prepared and submitted to the Department for review and approval in accordance with Permit Section 9.5.

9.0 REFERENCES

DOE, 1995. "DOE Methods for Evaluating Environmental and Waste Management Samples," DOE/EM-0089T, Rev. 2. Prepared for the U.S. Department of Energy by Pacific Northwest Laboratory, Richland, Washington.

EPA, 1986 and all approved updates. “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA-*SW-846*, U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, U.S. Government Printing Office, Washington, D.C.

EPA, 2002. "RCRA Waste Sampling Draft Technical Guidance Planning, Implementation, and Assessment," EPA530-D-02-002, August 2002, Office of Solid Waste, U.S. Environmental Protection Agency, Washington, DC.

NIOSH, 1994. The National Institute for Occupational Health and Safety (NIOSH) *Manual of Analytical Methods*, 4th ed. Issue 1. 1994.

Table G.29-1

Closure Schedule for the Technical Area 55, Building 4, Room B13, Indoor Container Storage Unit

Activity	Maximum Time Required
Notify the Department of intent to close.	-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

Table G.29-2

Potential Waste Materials, Waste Types, and Disposal Options

Potential Waste Materials	Waste Types	Disposal Options
Personal protective equipment (PPE)	Non-regulated solid waste	Subtitle D landfill
	Hazardous waste	The PPE will be treated to meet Land Disposal Restriction (LDR) treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its state analog, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or the Waste Isolation Pilot Plant (WIPP), as appropriate.
Decontamination wash water	Non-regulated liquid waste	Sanitary sewer
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Radioactive liquid waste	Radioactive Liquid Waste Treatment Facility (RLWTF)
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or WIPP, as appropriate.
Metal	Non-regulated solid waste	Subtitle D landfill or recycled
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its

Table G.29-2

Potential Waste Materials, Waste Types, and Disposal Options

Potential Waste Materials	Waste Types	Disposal Options
		state analog, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, or WIPP, as appropriate.
Discarded concrete	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its state analog, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or WIPP, as appropriate.
	Non-regulated solid waste	Subtitle D landfill, recycled, or reused
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
Discarded waste management equipment	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its state analog, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or WIPP, as appropriate.
	Non-regulated solid waste	Subtitle D landfill
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
Sampling equipment	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its state analog, or an authorized off-site radioactive waste disposal facility.

Table G.29-2

Potential Waste Materials, Waste Types, and Disposal Options

Potential Waste Materials	Waste Types	Disposal Options
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or WIPP, as appropriate.
	Non-regulated solid waste	Subtitle D landfill
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.

Table G.29-3

Sample Containers[a], Preservation Techniques, and Holding Times[b]

Analyte Class and Sample Type	Container Type and Materials	Preservation	Holding Time
Metals			
TCLP/Total Metals: Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver	Aqueous Media: 500-mL Wide Mouth-Polyethylene or Glass with Teflon Liner	Aqueous Media: HNO_3 to pH <2 Cool to 4 °C	180 Days
	Solid Media: 125-mL Glass	Solid Media: Cool to 4 °C	
TCLP/Total Mercury	Aqueous Media: 500-mL Wide Mouth-Polyethylene or Glass with Teflon Liner	Aqueous Media: HNO_3 to pH <2 Cool to 4 °C	28 Days
	Solid Media: 125-mL Glass	Solid Media: Cool to 4 °C	
Volatile Organic Compounds			
Target Compound Volatile Organic Compounds	Aqueous Media: Two 40-mL Amber Glass Vials with Teflon-Lined Septa	Aqueous Media: HCl to pH<2 Cool to 4 °C	14 days
	Solid Media: 125-mL Glass or Two 40-mL Amber Glass Vials with Teflon-Lined Septa	Solid Media Cool to 4 °C Add 5 mL Methanol or Other Water Miscible Organic Solvent to 40-mL Glass Vials	

Semi-Volatile Organic Compounds			
Target Compound Semi-volatile Organic Compounds	Aqueous Media: Four 1-L Amber Glass with Teflon-Lined Lid	Aqueous Media: Cool to 4 °C	Seven days from field collection to preparative extraction. 40 days from preparative extraction to determinative analysis.
	Solid Media: 250-mL Glass	Solid Media: Cool to 4 °C	

[a] Smaller sample containers may be required due to health and safety concerns associated with potential radiation exposure, transportation requirements, and waste management considerations.

[b] Information obtained from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," *SW-846*, U.S. Environmental Protection Agency, 1986 and all approved updates.

°C = degrees Celsius **HNO_3 = nitric acid**
HCl = hydrochloric acid **L = Liter**
mL = milliter **TCLP = Toxicity Characteristic Leaching Procedure**

Table G.29-4

Summary of Analytical Methods

Analyte	EPA *SW-846* Analytical Method [a]	Test Methods/ Instrumentation	Target Detection Limit [b]	Rationale
Metal Analysis				
Arsenic	7060A [c], 7061A	FLAA, GFAA	10 ug/L	Determine the metal concentration in the samples.
Barium	7080A [d], 7081 [c]	FLAA,GFAA	200 ug/L	
Cadmium	7130 [d], 7131A [c]	FLAA, GFAA	2 ug/L	
Chromium	7190 [d], 7191 [c]	FLAA, GFAA	10 ug/L	
Lead	7420 [d], 7421 [c]	FLAA, GFAA	5 ug/L	
Mercury	7470A, 7471A [e]	CVAA	0.2 ug/L	
Selenium	7740[c], 7741A	FLAA, GFAA	5 ug/L	
Silver	7760A[d], 7761 [c]	FLAA, GFAA	10 ug/L	
Organic Analysis				
Target compound list VOCs plus ten tentatively identified compounds (TIC)	8260B	GC/MS	10 mg/L	Determine the VOCs concentration in the samples.
Target compound list SVOCs plus 20 TICs	8270D [c]	GC/MS	10 mg/L	Determine the SVOCs concentration in the samples.

[a] U.S. Environmental Protection Agency (EPA), 1986 and all approved updates, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," *SW-846*.
[b] Detection limits listed for metals are for clean water. Detection limits for organics are expressed as practical quantitation limits. Actual detection limits may be higher depending on sample composition and matrix type.
[c] Method being integrated into Method 7010, per the May 1998 *SW-846* Draft Update IVA.
[d] Method being integrated into Method 7000B, per the May 1998 *SW-846* Draft Update IVA.
[e] Method being revised to 7471B per the May 1998 *SW-846* Draft Update IVA.

CVAA = Cold-vapor atomic absorption spectroscopy; GFAA= Graphite furnace atomic absorption spectroscopy;
FLAA = Flame atomic absorption spectroscopy; mg/L= milligrams per liter;
GC/MS = Gas chromatography/mass spectrometry; ug/L = micrograms per liter.

Table G.29-5

Quality Control Sample Types, Applicable Analyses, Frequency, and Acceptance Criteria

QC Sample Type	Applicable Analysis [a]	Frequency	Acceptance Criteria
Trip Blank	VOC	One set per shipping cooler containing samples to be analyzed for VOCs	Not Applicable
Field Blank	VOC/SVOC, metals	One sample daily per analysis	Not Applicable
Field Duplicate	Chemical	One for each sampling sequence	Relative percent difference less than or equal to 20 percent
Equipment Rinsate Blank[b]	VOC/SVOC, metals	One sample daily	Not Applicable

[a] For VOC and SVOC analysis, if blank shows detectable levels of any common laboratory contaminant (*e.g.*, methylene chloride, acetone, 2-butanone, toluene, and/or any phthalate ester), sample must exhibit that contaminant at a level 10 times the quantitation limit to be considered detectable. For all other contaminants, sample must exhibit the contaminant at a level 5 times the quantitation level to be considered detectable.

[b] Collected only if reusable sampling equipment used.

Figure G.29-1 has been provided under separate cover

ATTACHMENT G.30
TECHNICAL AREA 55, BUILDING 4 ROOM G12
INDOOR CONTAINER STORAGE UNIT
CLOSURE PLAN

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1.0 INTRODUCTION

This closure plan describes the activities necessary to close the indoor hazardous waste container storage unit which is located in Room G12 in the basement of Technical Area 55, Building 4 (TA-55-4) 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 entire floor of the permitted unit has been used for storage of hazardous waste. The permitted unit is located in the TA-55-4 basement. This storage area is irregularly shaped (512.98 ft^2) and the walls consist of chain link fencing, shown in Figure G.30-1. The maximum storage capacity of this unit is 5,225 gal or the equivalent of 95 – 55 gal drums. The types of waste containers holding hazardous or mixed waste that will be stored in G12 include 30, 55, 85 gal drums; and solid waste boxes. No containers with free liquids will be stored in this unit, so secondary containment will not be necessary.

The permitted unit was constructed in 1979, where the unit now resides. The unit is used to store hazardous and mixed waste. 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 regarding waste management procedures and hazardous waste constituents stored at the permitted unit.

3.0 ESTIMATE OF MAXIMUM WASTE STORED

To date, no hazardous waste has been stored at the permitted unit. Throughout the life of this Permit it is estimated that 1,000 cubic meters of waste will be stored in the permitted unit.

4.0 GENERAL CLOSURE REQUIREMENTS

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 for container storage units.

Closure of the permitted unit will be deemed complete when: 1) all 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.

4.2 Closure Schedule

This closure plan schedule is intended to address the closure requirements for the permitted unit within the authorized timeframe of the current Hazardous Waste Facility Permit (*see* Permit Section 9.4). The following section provides the schedule of closure activities (*see also* Table G.30-1 of this closure plan).

Notification of closure will occur at least 45 days before the Permittees expect to begin closure (*see* 40 CFR § 264.112(d)(1)) and closure activities will begin according to the requirements of 40 CFR § 264.112(d)(2). However, pursuant to 40 CFR §264.112(e), removing hazardous wastes and decontaminating or dismantling equipment in accordance with an approved closure plan may be conducted at any time before or after notification of closure. Notification of the structural assessment (assessment), as described in Section 5.2 of this closure plan, shall occur in accordance with Permit Section 9.4.6.2.

Within 90 days after the final receipt of hazardous waste, the permitted unit will be emptied of all stored waste. Within ten days of completing hazardous waste removal or within 100 days of the final receipt of hazardous waste the Permittees will complete the records review (review) and assessment and submit an amended closure plan, if necessary, to the Department for review and approval as a permit modification in accordance with Permit Section 9.4.8. Upon approval of the modified closure plan, if applicable, the Permittees will decontaminate unit surfaces and related equipment.

Decontamination verification sampling activities, and soil sampling if applicable, will be conducted to demonstrate that surfaces, related equipment, and media, if applicable, at the permitted unit meet the closure performance standards in Permit Section 9.2.

All closure activities, including submittal of a final closure certification report to the Department for review and approval, will be submitted to the Department within 180 days after the final receipt of waste. In the event that closure of the permitted unit cannot proceed according to schedule, the Permittees will notify the Department in accordance with the extension request requirements in Permit Section 9.4.1.1.

5.0 CLOSURE PROCEDURES

Closure activities at the permitted unit will include: removal of hazardous wastes; proper management and disposal of hazardous waste residues and contaminated surfaces and equipment associated with the permitted unit; verification that the closure performance standards in Permit Section 9.2 have been achieved; and submittal of a final closure certification report. The following sections describe closure activities applicable to the permitted unit.

5.1 Removal of Waste

In accordance with Permit Section 9.4.2, all stored hazardous wastes will be removed from the permitted unit scheduled for closure. Depending upon their size, containers will be removed with forklifts, container dollies, air pallets, or manually. Containers will be placed on flat bed trucks, trailers, or other appropriate vehicles for transport. Appropriate shipping documentation will accompany the wastes during transport. Containers holding hazardous wastes will be moved to a permitted on-site storage unit or a permitted off-site treatment, storage, or disposal facility.

5.2 Records Review and Structural Assessment

After waste removal and before starting closure decontamination and sampling activities, the Facility Operating Record for the permitted unit will be reviewed and an assessment will 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 Record, including inspection records, shall be reviewed in accordance with 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 Record).

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 floor and walls of the permitted unit 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 Related 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 surfaces and related equipment will be decontaminated, or 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. Decontamination activities will ensure the removal of all hazardous waste residues and hazardous constituents from the permitted unit to meet the closure performance standards outlined in Permit Section 9.2.

5.3.1 Removal of Structures and Related Equipment

All surfaces 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. Table G.30-2 outlines the potential waste materials, waste types, and disposal options.

5.3.2 Decontamination of Structures and Related Equipment

All surfaces, structures, and related equipment that will be left in place or reused by the Facility will be decontaminated in accordance with Permit Section 9.4.3.1. Decontamination of the permitted unit's surfaces will include all features located within the unit. There is currently no equipment located at the permitted unit that is expected to be left in place; however, if equipment identified during the assessment is expected to be left in place, it will be decontaminated in accordance with this section.

Decontamination of the permitted unit will be conducted by first removing loose material (*e.g.*, dust, dirt) through sweeping followed by washing using a manual wipe-down method with a solution consisting of a surfactant detergent (*e.g.*, Alconox®) and water mixed in accordance with the manufacturer's recommendations.

Wipe-down washing will be utilized because of the need to minimize the potential for exposure to workers and the migration of cleaning solution to other areas of the basement outside the permitted unit's boundary. Migration of the wash solution (in the form of splashing, condensation, or drainage) from steam cleaning or pressure washing may potentially contaminate or otherwise negatively affect ongoing operations within the basement. Migration can potentially be mitigated using plastic barriers taped to surfaces to enclose the area. However, areas enclosed in this manner will require workers to use additional personal protective equipment (PPE). This PPE will include fully enclosed protective wear and supplied air because of the increased risk of exposure to personnel due to potential release of radiological materials and organic

compounds and concentration within the enclosure. Enclosure of the area increases the risk of personnel exhaustion, because of the additional PPE, and the potential for workers to reach radiological work exposure limits. Therefore, wipe-down washing, rather than steam cleaning or pressure washing, will be utilized because of the need to minimize the potential for exposure to workers and the migration of cleaning solution to other areas of the basement outside the permitted unit's boundary.

The entirety of the unit's floors will be decontaminated. To ensure that decontamination of the walls is conducted to a sufficient height, all walls in the permitted unit will be decontaminated to a height of 8 feet.

The ceilings of this permitted unit is 8 feet tall and will be decontaminated. 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 waste was stored in the permitted unit, or a spill or release occurred within the permitted unit that could have affected the surrounding areas.

Cloths, or other absorbent cleaning devices, will not be reused to wipe down the surfaces after being wetted in the wash solution or after spraying solution onto the surfaces. Only one cloth or absorbent cleaning device will be used at a time in a single area to prevent cross-contamination. To minimize the amount of liquid waste generated as a result of decontamination activities, the wash solution will be dispersed from buckets, spray bottles, or other types of small containers.

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.

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.30-2 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 closure sampling and analysis 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 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 at least one wipe

sample from the floor and from each wall (up to 11 feet) of the permitted unit. Verification wipe samples will be collected from random locations within each of the sample areas indicated on Figure G.30-1 (provided under separate cover) of this closure plan. A total of 1 wipe sample, from the floor. 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 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.

6.2.2 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.30-3.

6.2.3 Cleaning of Sampling Equipment

Reusable sampling equipment will be cleaned and rinsed prior to use. Sampling equipment rinsate blanks will be collected and analyzed only if reusable sampling equipment is used. Reusable decontamination equipment, including protective clothing and tools, used during closure activities will be scraped as necessary to remove residue and cleaned with a wash water solution. Sampling equipment will be cleaned prior to each use with a wash solution, rinsed several times with tap water, and air-dried to prevent cross-contamination of samples. A disposable sampler is considered clean if still in a factory-sealed wrapper.

6.3 Sample Management Procedures

The following sections provide a description of sample documentation, handling, preservation, storage, packaging, and transportation requirements that will be followed during the sampling activities associated with the closure.

6.3.1 Sample Documentation

Sampling personnel will complete and maintain records to document sampling and analysis activities. Sample documentation will include sample identification numbers, chain-of-custody forms, analysis requested, sample logbooks detailing sample collection activities, and shipping forms (if necessary).

6.3.1.1 Chain-of-Custody

Chain-of-custody forms will be maintained by sampling personnel until samples are relinquished to the analytical laboratory. This will ensure the integrity of the samples and provide for an accurate and defensible written record of the sampling possession and handling from the time of collection until laboratory analysis. One chain-of-custody form may be used to document all of the samples collected from a single sampling event. The sample collector will be responsible for the integrity of the samples collected until properly transferred to another person. The EPA considers a sample to be in a person's custody if it is:

a. in a person's physical possession;

b. in view of the person in possession; or

c. secured by that person in a restricted access area to prevent tampering.

The sample collector will document all pertinent sample collection data. Individuals relinquishing or receiving custody of the samples will sign, date, and note the time on the analysis request and chain-of-custody form. A chain-of-custody form must accompany all samples from collection through laboratory analysis. The analytical laboratory will return the completed chain-of-custody form to the Facility and it will become part of the permanent sampling record documenting the sampling efforts.

6.3.1.2 Sample Labels and Custody Seals

A sample label will be affixed to each sample container. The sample label will include the following information:

a. a unique sample identification number;

b. name of the sample collector;

c. date and time of collection;

d. type of preservatives used, if any; and

e. location from which the sample was collected.

A custody seal will be placed on each sample container to detect unauthorized tampering with the samples. These labels must be initialed, dated, and affixed by the sample collector in such a manner that it is necessary to break the seal to open the container.

6.3.1.3 Sample Logbook

All pertinent information on the sampling effort must be recorded in a bound logbook. Information must be recorded in ink and any cross-outs must be made with a single line with the change initialed and dated by the author. The sample logbook will include the following information:

a. the sample location;

b. suspected composition;

c. sample identification number;

d. volume/mass of sample taken;

e. purpose of sampling;

f. description of sample point and sampling methodology;

g. date and time of collection;

h. name of the sample collector;

i. sample destination and how it will be transported;

j. observations;

k. name(s) of personnel responsible for the observations; and

l. any deviations and supporting information

6.3.2 Sample Handling, Preservation, and Storage

Samples will be collected and containerized in appropriate pre-cleaned sample containers. Table G.30-4 presents the requirements in *SW-846* (EPA, 1986) for sample containers, preservation techniques, and holding times. Samples that require cooling to 4 degrees Celsius will be placed in a cooler with ice or ice gel or in a refrigerator immediately upon collection.

6.3.3 Packaging and Transportation of Samples

All packaging and transportation activities will meet safety expectations, QA requirements, DOE Orders, and relevant local, state, and federal laws (including 10 CFR and 49 CFR). Appropriate Facility documents establish the requirements for packaging design, testing, acquisition, acceptance, use, maintenance, and decommissioning and for on-site, intra-site, and off-site shipment preparation and transportation of general commodities, hazardous materials, substances, wastes, and defense program materials.

Off-site transportation of samples will occur via private, contract, or common motor carrier, air carrier, or freight. All off-site transportation will be processed through the Facility packaging and transportation organization unless the shipper is specifically authorized through formal documentation by the packaging and transportation organization to independently tender shipments to common motor or air carriers.

6.4 Sample Analysis Requirements

Samples will be analyzed for all hazardous constituents listed in Appendix VIII of 40 CFR Part 261 and in Appendix IX of 40 CFR Part 264 that have been stored at the permitted unit over its operational history, which will be assessed prior to closure. Samples will be analyzed by an independent laboratory using the methods outlined in Table G.30-4. Analytes, test methods and instrumentation, target detection limits, and rationale for metals and organic analyses are presented in Table G.30-4. If any of the information in this table has changed at the time of closure, the Permittees will amend this closure plan to update all methods in this SAP.

6.4.1 Analytical Laboratory Requirements

The analytical laboratory will perform the detailed qualitative and quantitative chemical analyses specified in Section 6.4.2. This analytical laboratory will have:

a. a documented comprehensive QA/QC program;

b. technical analytical expertise;

c. a document control and records management plan; and

d. the capability to perform data reduction, validation, and reporting.

The selection of the analytical testing methods identified in Table G.30-4 is based on the following considerations:

e. the physical form of the waste;

f. constituents of concern;

g. required detection limits (*e.g.*, regulatory thresholds); and

h. information requirements (*e.g.*, waste classification).

6.4.2 Quality Assurance/Quality Control

All sampling and analysis will be conducted in accordance with QA/QC procedures defined by the latest revision of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (*SW-846*) (EPA, 1986) or other Department-approved procedures. Field sampling procedures and laboratory analyses will be evaluated through the use of QA/QC samples to assess the overall quality of the data produced. QC samples evaluate precision, accuracy, and potential sample contamination associated with the sampling and analysis process, and is described in the following sections, along with information on calculations necessary to evaluate the QC results.

6.4.2.1 Field Quality Control

The field QC samples that will be collected are trip blanks, field blanks, field duplicates, and equipment rinsate blanks. Table G.30-5 presents a summary of QC sample types, applicable analyses, frequency, and acceptance criteria. QC samples will be given a unique sample identification number and submitted to the analytical laboratory as blind samples. QC samples will be identified on the applicable forms so that the results can be applied to the associated sample.

6.4.2.2 Analytical Laboratory QC Samples

QA/QC considerations are an integral part of analytical laboratory operations. Laboratory QA ensures that analytical methods generate data that are technically sound, statistically valid, and that can be documented. QC procedures are the tools employed to measure the degree to which these QA objectives are met.

6.4.3 Data Reduction, Verification, Validation, and Reporting

Analytical data generated by the activities described in this closure plan will be verified and validated. Data reduction is the conversion of raw data to reportable units, transfer of data between recording media, and computation of summary statistics, standard errors, confidence intervals, and statistical tests.

6.4.4 Data Reporting Requirements

Analytical results will include all pertinent information about the condition and appearance of the sample-as-received. Analytical reports will include:

a. a summary of analytical results for each sample;

b. results from QC samples such as blanks, spikes, and calibrations;

c. reference to standard methods or a detailed description of analytical procedures; and

d. raw data printouts for comparison with summaries.

The laboratory will describe sample preparations that occur during the analysis in sufficient detail so that the data user can understand how the sample was analyzed.

7.0 WASTE MANAGEMENT

All waste generated during closure will be controlled, handled, characterized, and disposed of in accordance with Permit Section 9.4.5, Permit Attachment C (*Waste Analysis Plan*), and Facility waste management procedures. Closure activities may generate different types of waste materials; these wastes are listed with potential disposal options in Table G.30-2 of this closure plan. Subsequent disposition options for the decontaminated structures and equipment include reuse, recycling, or disposal. Reusable protective clothing, tools, and equipment used during decontamination will be cleaned with a wash water solution.

8.0 CLOSURE CERTIFICATION REPORT

Upon completion of the closure activities at the permitted unit, a closure certification report will be prepared and submitted to the Department for review and approval in accordance with Permit Section 9.5.

9.0 REFERENCES

DOE, 1995. "DOE Methods for Evaluating Environmental and Waste Management Samples," DOE/EM-0089T, Rev. 2. Prepared for the U.S. Department of Energy by Pacific Northwest Laboratory, Richland, Washington.

EPA, 1986 and all approved updates. “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA-*SW-846*, U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, U.S. Government Printing Office, Washington, D.C.

EPA, 2002. "RCRA Waste Sampling Draft Technical Guidance Planning, Implementation, and Assessment," EPA530-D-02-002, August 2002, Office of Solid Waste, U.S. Environmental Protection Agency, Washington, DC.

NIOSH, 1994. The National Institute for Occupational Health and Safety (NIOSH) *Manual of Analytical Methods*, 4th ed. Issue 1. 1994.

Table G.30-1

Closure Schedule for the Technical Area 55, Building 4, Room G12, Indoor Container Storage Unit

Activity	Maximum Time Required
Notify the Department of intent to close.	-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

Table G.30-2

Potential Waste Materials, Waste Types, and Disposal Options

Potential Waste Materials	Waste Types	Disposal Options
Personal protective equipment (PPE)	Non-regulated solid waste	Subtitle D landfill
	Hazardous waste	The PPE will be treated to meet Land Disposal Restriction (LDR) treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its state analog, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or the Waste Isolation Pilot Plant (WIPP), as appropriate.
Decontamination wash water	Non-regulated liquid waste	Sanitary sewer
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
	Radioactive liquid waste	Radioactive Liquid Waste Treatment Facility (RLWTF)
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or WIPP, as appropriate.
Metal	Non-regulated solid waste	Subtitle D landfill or recycled
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.

Table G.30-2

Potential Waste Materials, Waste Types, and Disposal Options

Potential Waste Materials	Waste Types	Disposal Options
	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its state analog, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, or WIPP, as appropriate.
Discarded concrete	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its state analog, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or WIPP, as appropriate.
	Non-regulated solid waste	Subtitle D landfill, recycled, or reused
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.
Discarded waste management equipment	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its state analog, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or WIPP, as appropriate.
	Non-regulated solid waste	Subtitle D landfill
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.

Table G.30-2

Potential Waste Materials, Waste Types, and Disposal Options

Potential Waste Materials	Waste Types	Disposal Options
Sampling equipment	Low-level radioactive solid waste	Either an authorized on-site radioactive waste disposal area that is not undergoing closure under RCRA or its state analog, or an authorized off-site radioactive waste disposal facility.
	Mixed waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill or WIPP, as appropriate.
	Non-regulated solid waste	Subtitle D landfill
	Hazardous waste	Waste will be treated to meet LDR treatment standards, if necessary, and disposed in a Subtitle C or D landfill, as appropriate.

Table G.30-3

Sample Containers[a], Preservation Techniques, and Holding Times[b]

Analyte Class and Sample Type	Container Type and Materials	Preservation	Holding Time
Metals			
TCLP/Total Metals: Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver	Aqueous Media: 500-mL Wide Mouth-Polyethylene or Glass with Teflon Liner	Aqueous Media: HNO_3 to pH <2 Cool to 4 °C	180 Days
	Solid Media: 125-mL Glass	Solid Media: Cool to 4 °C	
TCLP/Total Mercury	Aqueous Media: 500-mL Wide Mouth-Polyethylene or Glass with Teflon Liner	Aqueous Media: HNO_3 to pH <2 Cool to 4 °C	28 Days
	Solid Media: 125-mL Glass	Solid Media: Cool to 4 °C	
Volatile Organic Compounds			
Target Compound Volatile Organic Compounds	Aqueous Media: Two 40-mL Amber Glass Vials with Teflon-Lined Septa	Aqueous Media: HCl to pH<2 Cool to 4 °C	14 days
	Solid Media: 125-mL Glass or Two 40-mL Amber Glass Vials with Teflon-Lined Septa	Solid Media Cool to 4 °C Add 5 mL Methanol or Other Water Miscible Organic Solvent to 40-mL Glass Vials	
Semi-Volatile Organic Compounds			

Target Compound Semi-volatile Organic Compounds	Aqueous Media: Four 1-L Amber Glass with Teflon-Lined Lid	Aqueous Media: Cool to 4 °C	Seven days from field collection to preparative extraction. 40 days from preparative extraction to determinative analysis.
	Solid Media: 250-mL Glass	Solid Media: Cool to 4 °C	

[a] Smaller sample containers may be required due to health and safety concerns associated with potential radiation exposure, transportation requirements, and waste management considerations.

[b] Information obtained from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," *SW-846*, U.S. Environmental Protection Agency, 1986 and all approved updates.

°C = degrees Celsius
HCl = hydrochloric acid
mL = milliter
HNO_3 = nitric acid
L = Liter
TCLP = Toxicity Characteristic Leaching Procedure

Table G.30-4

Summary of Analytical Methods

Analyte	EPA *SW-846* Analytical Method [a]	Test Methods/ Instrumentation	Target Detection Limit [b]	Rationale
Metal Analysis				
Arsenic	7060A [c], 7061A	FLAA, GFAA	10 ug/L	Determine the metal concentration in the samples.
Barium	7080A [d], 7081 [c]	FLAA,GFAA	200 ug/L	
Cadmium	7130 [d], 7131A [c]	FLAA, GFAA	2 ug/L	
Chromium	7190 [d], 7191 [c]	FLAA, GFAA	10 ug/L	
Lead	7420 [d], 7421 [c]	FLAA, GFAA	5 ug/L	
Mercury	7470A, 7471A [e]	CVAA	0.2 ug/L	
Selenium	7740[c], 7741A	FLAA, GFAA	5 ug/L	
Silver	7760A[d], 7761 [c]	FLAA, GFAA	10 ug/L	
Organic Analysis				
Target compound list VOCs plus ten tentatively identified compounds (TIC)	8260B	GC/MS	10 mg/L	Determine the VOCs concentration in the samples.
Target compound list SVOCs plus 20 TICs	8270D [c]	GC/MS	10 mg/L	Determine the SVOCs concentration in the samples.

[a] U.S. Environmental Protection Agency (EPA), 1986 and all approved updates, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," *SW-846*.

[b] Detection limits listed for metals are for clean water. Detection limits for organics are expressed as practical quantitation limits. Actual detection limits may be higher depending on sample composition and matrix type.

[c] Method being integrated into Method 7010, per the May 1998 *SW-846* Draft Update IVA.

[d] Method being integrated into Method 7000B, per the May 1998 *SW-846* Draft Update IVA.

[e] Method being revised to 7471B per the May 1998 *SW-846* Draft Update IVA.

CVAA = Cold-vapor atomic absorption spectroscopy; GFAA= Graphite furnace atomic absorption spectroscopy; FLAA = Flame atomic absorption spectroscopy; mg/L = milligrams per liter; GC/MS = Gas chromatography/mass spectrometry; ug/L = micrograms per liter.

Table G.30-5

Quality Control Sample Types, Applicable Analyses, Frequency, and Acceptance Criteria

QC Sample Type	Applicable Analysis [a]	Frequency	Acceptance Criteria
Trip Blank	VOC	One set per shipping cooler containing samples to be analyzed for VOCs	Not Applicable
Field Blank	VOC/SVOC, metals	One sample daily per analysis	Not Applicable
Field Duplicate	Chemical	One for each sampling sequence	Relative percent difference less than or equal to 20 percent
Equipment Rinsate Blank[b]	VOC/SVOC, metals	One sample daily	Not Applicable

[a] For VOC and SVOC analysis, if blank shows detectable levels of any common laboratory contaminant (*e.g.*, methylene chloride, acetone, 2-butanone, toluene, and/or any phthalate ester), sample must exhibit that contaminant at a level 10 times the quantitation limit to be considered detectable. For all other contaminants, sample must exhibit the contaminant at a level 5 times the quantitation level to be considered detectable.

[b] Collected only if reusable sampling equipment used.

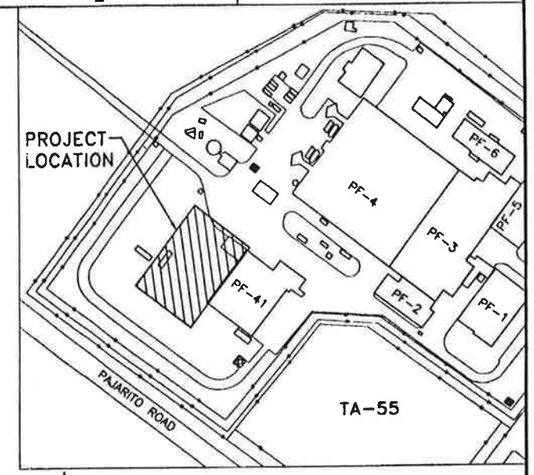
Figure G.30-1 has been provided under separate cover

ATTACHMENT E

TA-55-0355 PAD DESIGN DRAWINGS

TA-55 SST PAD

BLDG 355 TA-55



LOCATION PLAN
SCALE: NONE TA-55

PROJECT DESIGN DATA

FOR STRUCTURAL PROJECT DESIGN DATA REFER TO SHEET S-0001.

LIST OF DRAWINGS

REVISION NUMBER	SHEET NUMBER	DISCIPLINE SHEET NUMBER	DRAWING TITLE
1	1	G-0001	TITLE SHEET AND LIST OF DRAWINGS
1	2	C-0001	LEGEND, ABBREVIATIONS AND GENERAL CIVIL NOTES
2	3	C-1000	OVERALL SITE PLAN
2	4	C-1001	UTILITY PLAN
2	5	C-1002	GRADING AND DRAINAGE PLAN
1	6	C-5000	DETAILS
1	7	C-5001	DETAILS
1	8	C-5002	DETAILS
1	9	S-0001	LEGEND, ABBREVIATIONS AND GENERAL STRUCTURAL NOTES
1	10	S-1000	CONCRETE SLAB PLAN
1	11	S-1001	CANOPY FRAMING PLAN
2	12	S-1002	TRAILER TIE-DOWN ANCHOR LOCATION PLAN
2	13	S-1003	TIE-DOWN BOOT LOCATION PLAN
1	14	S-3000	CONCRETE SLAB SECTIONS
1	15	S-3001	CANOPY FRAMING SECTIONS
2	16	S-3002	LANDING GEAR AND REAR WHEEL BOOT SECTIONS
1	17	S-5000	CONCRETE SLAB DETAILS
1	18	S-5001	CANOPY FRAMING DETAILS
2	19	S-5002	LANDING GEAR AND REAR WHEEL BOOT DETAILS
2	20	S-5003	TIE-DOWN ANCHOARGE DETAILS
1	21	S-5004	SERVICE PANEL RACK DETAILS
1	22	E-0001	ELECTRICAL SYMBOLS AND ABBREVIATIONS
1	23	E-1000	ELECTRICAL POWER PLAN
1	24	E-1001	ELECTRICAL LIGHTING PLAN
2	25	E-1002	CANOPY GROUNDING AND LIGHTNING PROTECTION PLAN
1	26	E-1003	POWER, SECURITY AND COMMUNICATION PLAN
1	27	E-1004	COMMUNICATION AND SECURITY PLAN
3	28	E-3000	ELECTRICAL SECTIONS
1	29	E-5000	ELECTRICAL DETAILS
2	30	E-6000	ELECTRICAL ONE LINE DIAGRAM
2	31	E-6001	LIGHTING CONTACTOR AND LADDER DIAGRAMS
1	32	E-7000	PANEL SCHEDULES
1	33	E-7001	PANEL SCHEDULE
4	34	E-7002	BILL OF MATERIAL AND NAMEPLATE SCHEDULE

PRODUCT OPTIONS/SUBSTITUTIONS

"OR APPROVED EQUAL" IS ALWAYS IMPLIED AFTER A BRAND NAME, PATENTED PROCESS OR CATALOG NUMBER. THE CONTRACTOR MAY SUBSTITUTE ANY BRAND OR PROCESS APPROVED AS AN EQUAL BY THE SPECIFYING ARCHITECT/ENGINEER. THE ONLY EXCEPTION IS WHERE "NO SUBSTITUTION" IS SPECIFIED. SEE GENERAL PROVISION "MATERIAL AND WORKMANSHIP".

WARNING

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NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
1	6/10/05	U	RECORD DOCUMENTS.	HFG	HFG	KRC	KRC	JJ

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TA-55 SST PAD

TITLE SHEET AND LIST OF DRAWINGS

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	H.GONZALES
CHECKED	K.CARR
DATE	3/21/05

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY PO Box 1663 Los Alamos, New Mexico 87545

SHEET G-0001

1 OF 34

CLASSIFICATION U REVIEWER J. CLARK DATE 3/21/05

PROJECT ID 101226 DRAWING NO. C53787 REV 1

Z:\30014765\CAD\CIVIL\101226-G-0001-R1.DWG, 06/10/05 @ 08:56 hgonzale

SYMBOL LEGEND

NEW	EXISTING	DESCRIPTION
		METAL BARRIER OR CONCRETE WALL BARRIER (AS INDICATED) (NS)
		DRAINAGE CULVERT/END SECTION
		DITCH/FLOW DIRECTION
		LIMITS OF DISTRUBANCE
		EROSION CONTROL BLANKETS
		COMPACTED BASE COURSE
		RIPRAP
HH		NEW 30" X 48" TELECOMMUNICATIONS HAND HOLE
		NEW 1 FT CONTOURS
		NEW 5 FT CONTOURS
		NEW CAS LINE
		NEW ELECTRICAL LINE
		SILT FENCE
		NEW INDUSTRIAL FENCE
	UE	EXISTING UNDERGROUND ELECTRICAL LINE
	E2	EXISTING SECONDARY ELECTRICAL LINE
	CE	EXISTING SECONDARY ELECTRICAL LINE (CONCRETE ENCASED)
	LN	EXISTING LABNET LINE
	T	EXISTING TELEPHONE LINE
	G	EXISTING GAS LINE
	W	EXISTING WATER LINE
		EXISTING EDGE OF ASPHALT ROADWAY
		EXISTING EDGE OF DIRT ROADWAY
		EXISTING INDUSTRIAL FENCE
		EXISTING 1 FT CONTOURS
		EXISTING 5 FT CONTOURS
		EXISTING LIGHT POLE
		EXISTING VALVE
		EXISTING FIRE HYDRANT
	491	EXISTING BUILDING AND BUILDING NUMBER

ABBREVIATION LEGEND

AL CAP	ALUMINUM CAP
AC	AIR CONDITIONER
CAS	CENTRAL ALARM STATION
CMP	CORRUGATED METAL PIPE
CP	CONTROL POINT
CULV	CULVERT
EC	EROSION CONTROL
EL	ELEVATION
EPR	EXTRUDED ETHYLENE PROPYLENE
GT	GUARD TOWER
HH	TELECOMMUNICATIONS HAND HOLE
INV	INVERT
LF	LINEAR FEET
NMDOT	NEW MEXICO DEPARTMENT OF TRANSPORTATION
PMBP	PLANT MIX BITUMINOUS PAVEMENT
S	SLOPE
SST	SECURE STORAGE TRANSPORT
XFMR	TRANSFORMER

GENERAL CIVIL NOTES

1. UTILITY/CONTOUR BACKGROUND DATA IS FURNISHED BY LANL UMAP DEPARTMENT AND MAY NOT FOLLOW LANL STANDARDS. SOFTWARE PRESENTATION GRANDFATHERED IN FOR LANL USE.
2. THE CONTRACTOR SHALL HAVE A COPY OF THE EXCAVATION PERMIT PRIOR TO BEGINNING ANY WORK ON THE SITE. COORDINATE START OF CONSTRUCTION WITH LANL AND FACILITY MANAGER.
3. THE LOCATIONS OF THE EXISTING UTILITIES ARE BASED ON A SITE SURVEY OF VISIBLE COMPONENTS, MAPS AND OTHER INFORMATION PROVIDED BY LANL. THE ACTUAL LOCATION MAY VARY. THE CONTRACTOR MUST REQUEST LOCATIONS FOR ALL UTILITIES FROM LANL PRIOR TO BEGINNING ANY WORK.
4. INSTALL SILT FENCE OR OTHER APPROPRIATE BEST MANAGEMENT PRACTICES ON THE DOWSLOPE OF AREAS TO BE DISTURBED PRIOR TO THE INITIATION OF SOIL DISTURBING ACTIVITIES.

NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
1	8/10/05	U	RECORD DOCUMENTS.	HFG	HFG	JF	KRC	JJ

DMJMH+N, Inc.

MERRICK BUILDING QUALITY SOLUTIONS
600 Sixth Street, Los Alamos, NM, 87544
(505) 662-0606, Fax (505) 662-3851

TA-55 SST PAD

LEGEND, ABBREVIATIONS AND GENERAL CIVIL NOTES

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	H.GONZALES
CHECKED	T.LEMKE
DATE	3/21/05

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY
PO Box 1663
Los Alamos, New Mexico 87545

SHEET C-0001

2 OF 34

CLASSIFICATION U

REVIEWER J. CLARK

DATE 3/21/05

PROJECT ID 101226

DRAWING NO. C53787

REV 1

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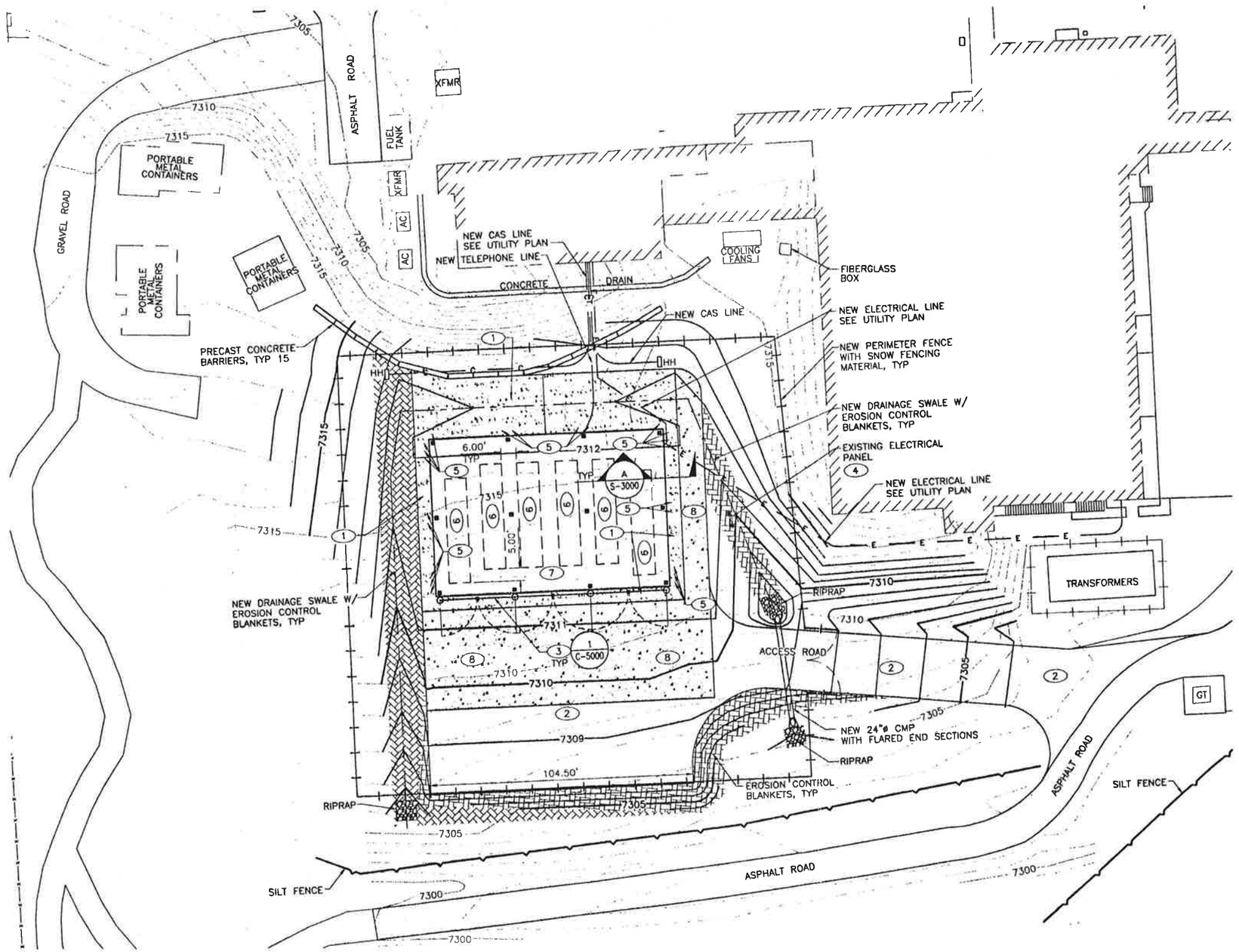

OVERALL SITE PLAN

20' 10' 0 10' 20'

1"=20'-0"

GENERAL NOTES

1. IF THIS SHEET IS NOT 36X24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.
2. THIS DRAWING IS BASED ON 2001 DATA AND FIELD SURVEY COMPLETED BY PRECISION SURVEYS INC. ON JANUARY 10, 2005.
3. ALL BEARINGS ARE GROUND BEARINGS.
4. ALL DISTANCES ARE GROUND DISTANCES: U.S. SURVEY FOOT.
5. THIS AREA LIES WITHIN TECHNICAL AREA 55, LOS ALAMOS NATIONAL LABORATORY, LOS ALAMOS COUNTY, NEW MEXICO.
6. COORDINATES ARE BASED UPON GPS LOCALIZATION DERIVED FROM LANL LAB WIDE CONTROL NETWORK MONUMENTS A0001, A0002, A0003, A0306, APR 10, APR 12, NMSR4-2, NMSR4-7. LANL LAB WIDE CONTROL NETWORK HORIZONTAL DATUM: NAD 1983; VERTICAL DATUM: NGVD 1929.
7. SEE SHEET C-1001 FOR ALL UTILITY INFORMATION.

KEYED NOTES

(1) PROVIDE 12" THICK CONCRETE APRON WHICH SLOPES AWAY FROM PAD AT A 2% SLOPE.
(2) PROVIDE 8" THICK AGGREGATE BASE COURSE ACCESS.
(3) NEW VEHICLE ACCESS GATE (3).
(4) EXISTING ELECTRICAL PANEL TO BE REMOVED.
(5) INSTALL NEW BOLLARDS. SEE DETAIL 1/C-5002.
(6) SST TRAILERS.
(7) CONCRETE PAD.
(8) PROVIDE 8" THICK CONCRETE PAD.

WARNING

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NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
2	8/10/05	U	RECORD DOCUMENTS.	HFG	HFG	JF	KRC	JJ
1	3/18/05	U	DCN-0008: ADDED NON-STRUCTURAL CONCRETE PAD.	HFG	HFG	JF	KRC	JJ

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TA-55 SST PAD

OVERALL SITE PLAN

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	H.GONZALES
CHECKED	T.LEMKE
DATE	3/21/05

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY PO Box 1663 Los Alamos, New Mexico 87545

SHEET C-1000

3 OF 34

CLASSIFICATION U REVIEWER J. CLARK DATE 3/21/05

PROJECT ID 101226 DRAWING NO. C53787 REV 2

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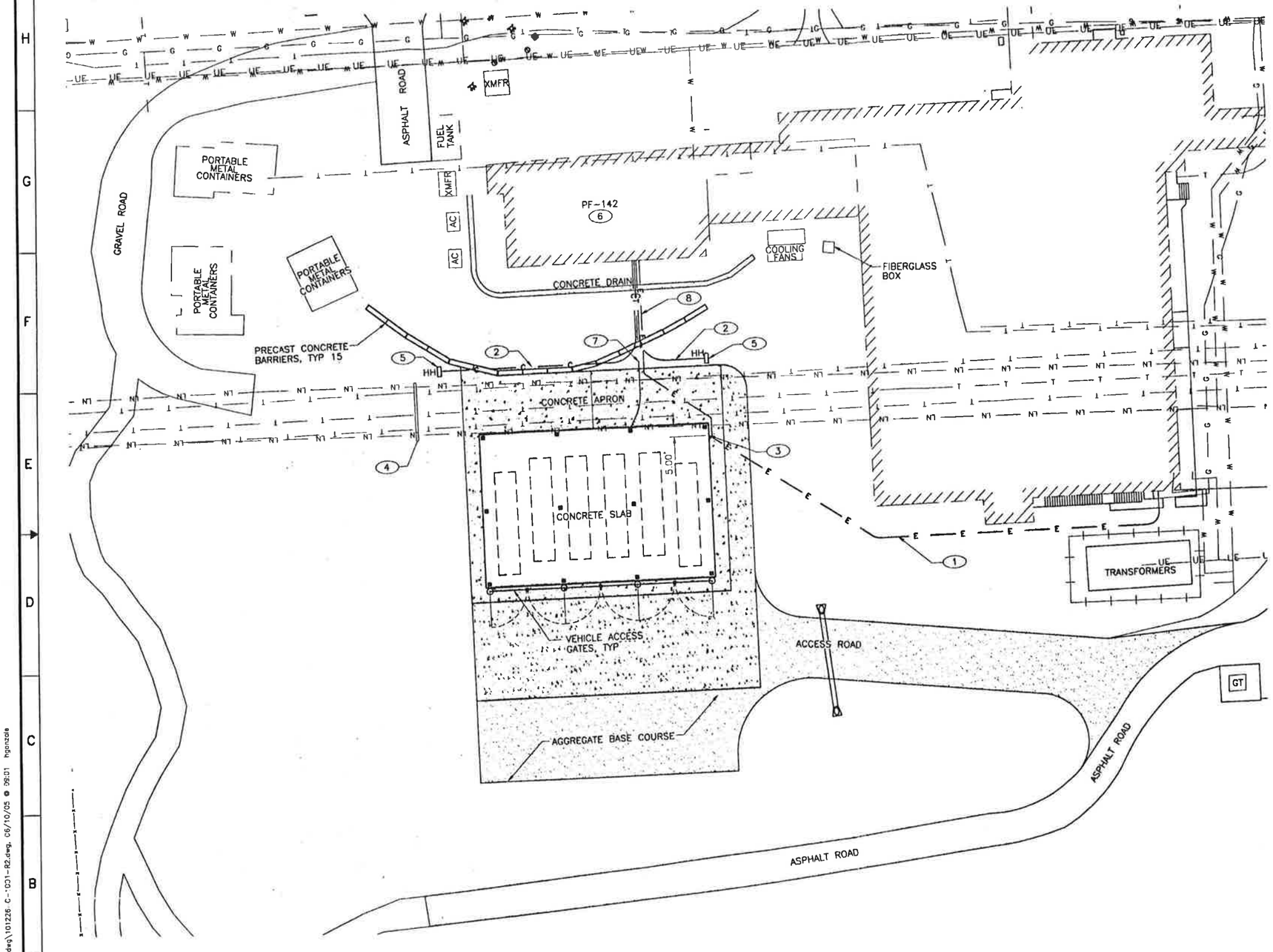

UTILITY PLAN

20' 10' 0 10' 20'

1"=20'-0"

GENERAL NOTES

1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.
2. THIS DRAWING IS BASED ON 2001 DATA AND FIELD SURVEY COMPLETED BY PRECISION SURVEYS INC. ON JANUARY 10, 2005.

KEYED NOTES

(1) INSTALL NEW ELECTRIC LINE TO SWBD--A. USE EXISTING STUB UPS TO GO THROUGH BUILDING.

(2) INSTALL NEW CAS LINE, SEE SHEET E-1003 FOR ROUTING OF CAS LINES ON STRUCTURE.

(3) SEE ELECTRICAL SHEETS FOR ELECTRICAL LINE CONTINUATION, CAS CONTINUATION, LIGHTNING PROTECTION AND GROUNDING.

(4) REMOVE EXISTING ABANDONED UTILITIES AS REQUIRED TO COMPLETE GRADING, AND SLAB AND UTILITY CONSTRUCTION.

(5) INSTALL NEW 30"X48" TELECOMMUNICATIONS HAND HOLE. SEE ELECTRICAL SHEETS FOR DETAILS.

(6) LEAVE 200'-0" OF CABLE IN ROOM 105.

(7) INSTALL NEW TELEPHONE LINE, SEE SHEET E-1003 FOR ROUTING.

(8) INSTALL NEW ELECTRIC LINE, SEE SHEET E-1003 FOR ROUTING.

NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
2	6/10/05	U	RECORD DOCUMENTS.	HFG	HFG	JF	KRC	JJ
1	5/19/05	U	DCN-008: ADDED NON-STRUCTURAL CONCRETE PAD.	HFG	HFG	JF	KRC	JJ

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TA-55 SST PAD

UTILITY PLAN

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	H.GONZALES
CHECKED	T.LEWKE
DATE	3/21/05

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY, PO Box 1663, Los Alamos, New Mexico 87545

SHEET C-1001

4 OF 34

CLASSIFICATION U | REVIEWER J. CLARK | DATE 3/21/05

PROJECT ID 101226 | DRAWING NO. C53787 | REV 2

WARNING

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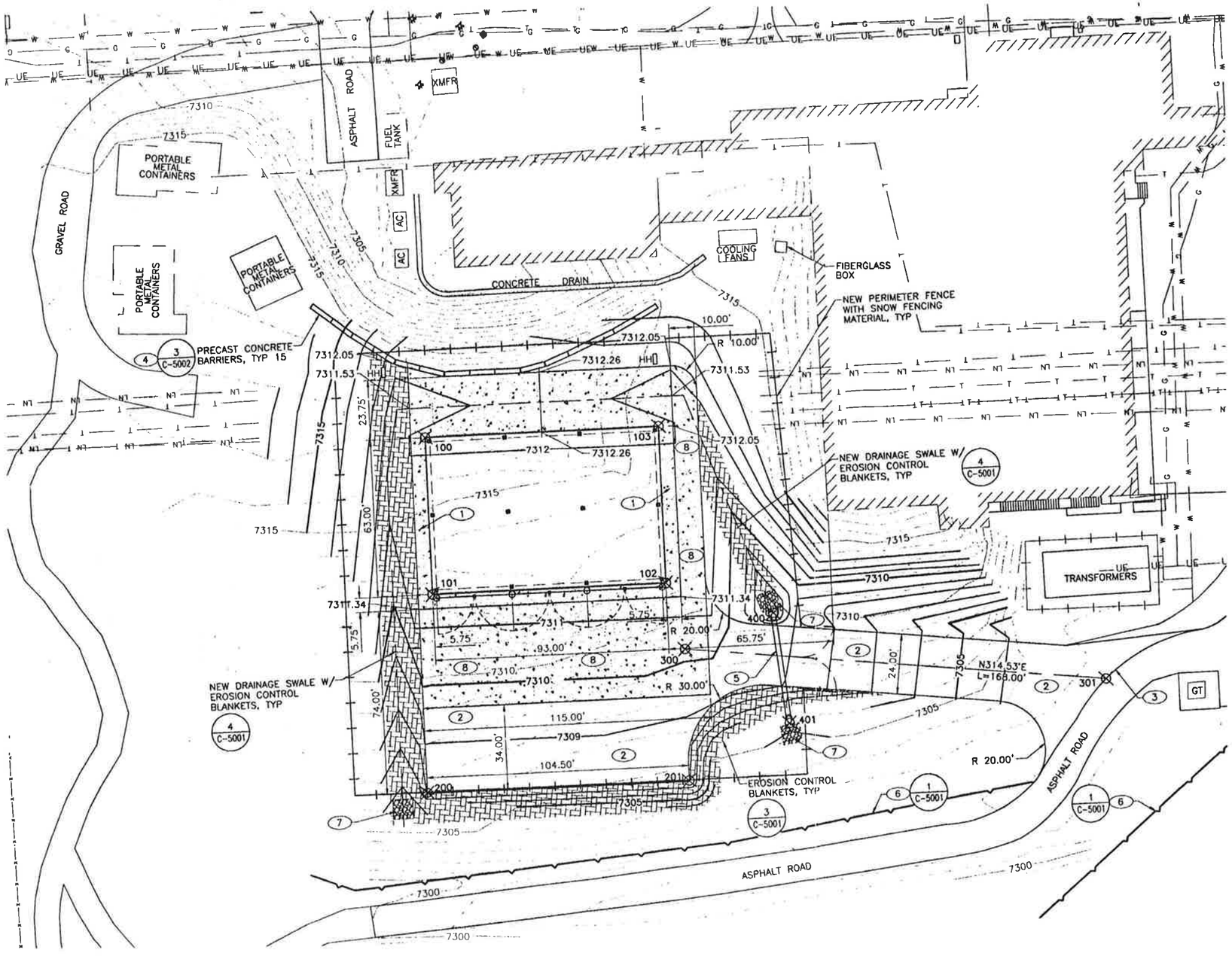

GENERAL NOTES

1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.
2. THIS DRAWING IS BASED ON 2001 DATA AND FIELD SURVEY COMPLETED BY PRECISION SURVEYS INC. ON JANUARY 10, 2005.
3. ALL BEARINGS ARE GROUND BEARINGS.
4. ALL DISTANCES ARE GROUND DISTANCES: U.S. SURVEY FOOT.
5. THIS AREA LIES WITHIN TECHNICAL AREA 55, LOS ALAMOS NATIONAL LABORATORY, LOS ALAMOS COUNTY, NEW MEXICO.
6. COORDINATES ARE BASED UPON GPS LOCALIZATION DERIVED FROM LANL LAB WIDE CONTROL NETWORK MONUMENTS A0001, A0002, A0003, A0306, APR 10, APR 12, NMSR4-2, NMSR4-7. LANL LAB WIDE CONTROL NETWORK HORIZONTAL DATUM: NAD 1983; VERTICAL DATUM: NGVD 1929.
7. REMOVE TOPSOIL AND UNSATISFACTORY SOIL MATERIALS FROM THE AREAS TO BE GRADED. EXCAVATE TO THE SUBGRADE ELEVATIONS INDICATED. STOCKPILE EXCAVATED TUFF. IN THE AREAS THAT WILL RECEIVE CONCRETE, REMOVE ALL SOILS DOWN TO TUFF. BACKFILL AS REQUIRED WITH EXCAVATED TUFF.
8. SEED ALL DISTURBED AREAS NOT STABILIZED WITH GRAVEL. PLACE EROSION CONTROL BLANKETS ON ALL DISTURBED SLOPES 3:1 OR STEEPER.

KEYED NOTES

(1) PROVIDE 12" THICK CONCRETE APRON WHICH SLOPES AWAY FROM PAD AT A 2% GRADE. GRADE ALL SLOPES FLUSH TO PAD.

(2) PROVIDE 8" THICK AGGREGATE BASE COURSE ACCESS.

(3) PROVIDE SMOOTH TRANSITION BETWEEN EXISTING ROADWAY SURFACE AND NEW AGGREGATE BASE COURSE.

(4) PRECAST CONCRETE BARRIERS ARE TO BE INSTALLED PRIOR TO INSTALLATION OF SST'S.

(5) INSTALL 38 LF OF NEW 24"ø CMP WITH FLARED END SECTIONS.

(6) SILT FENCE TO BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING OR OTHER SOIL DISTURBING ACTIVITIES.

(7) 8'-0" X 8'-0" X 1'-0" THK, NMDOT CLASS C RIPRAP BLANKET WITH GEOTEXTILE. INSTALL RIPRAP TO FORM A UNIFORM, WELL-GRADED MASS OF STONE WITH A MINIMUM OF VOIDS. ENSURE CENTERLINE IS 6" MINIMUM LOWER THAN OUTSIDE EDGES. PLACEMENT OF RIPRAP BY METHODS LIKELY TO CAUSE SEGREGATION (DUMPING, CHUTES) IS NOT PERMITTED.

(8) INSTALL 8" THICK CONCRETE PAD WITH 6" X 6", 10 GAGE MESH REINFORCEMENT. CONSTRUCT USING MINIMUM 4000 PSI CONCRETE IN ACCORDANCE WITH THE STANDARD LANL SPECIFICATION. GRADE TO MATCH EXISTING AND TO ALLOW FOR DRAINAGE. THIS IS A NON-STRUCTURAL CONCRETE PAD BUILT

GEOMETRIC CONTROL

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	1769515.43	1624275.70	7312.26	NW CORNER PAD
101	1769465.57	1624237.20	7311.55	SW CORNER PAD
102	1769408.73	1624310.81	7311.55	SE CORNER PAD
103	1769458.59	1624349.31	7312.26	NE CORNER PAD
200	1769405.96	1624183.90	7308.14	SW CORNER BASE COURSE
201	1769342.09	1624266.61	7308.14	SE CORNER BASE COURSE
300	1769383.40	1624299.36	7310.35	CENTERLINE ROAD END
301	1769265.59	1624419.13	MATCH	CENTERLINE ROAD BEGIN
400	1769372.00	1624335.50	7306.54	NORTH CMP INVERT
401	1769333.93	1624311.84	7305.64	SOUTH CMP INVERT

GRADING AND DRAINAGE PLAN

1"=20'-0"

WARNING

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2	6/10/05	U	RECORD DOCUMENTS.	HFG	HFG	JF	KRC	JJ
1	5/19/05	U	DCN-008: ADDED NON-STRUCTURAL CONCRETE PAD.	HFG	HFG	JF	KRC	JJ

DMJMH+N, Inc.

MERRICK BUILDING QUALITY SOLUTIONS
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(505) 662-0808, Fax (505) 662-3851

TA-55 SST PAD

GRADING AND DRAINAGE PLAN

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	H.GONZALES
CHECKED	T.LEMKE
DATE	3/21/05

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY PO Box 1663 Los Alamos, New Mexico 87545

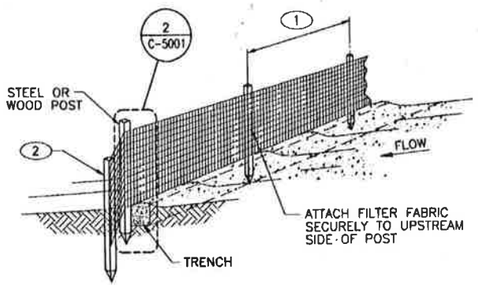
SHEET C-1002

5 OF 34

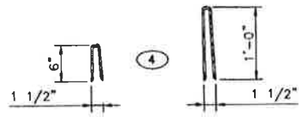
CLASSIFICATION U REVIEWER J. CLARK DATE 3/21/05

PROJECT ID 101226 DRAWING NO. C53787 REV 2

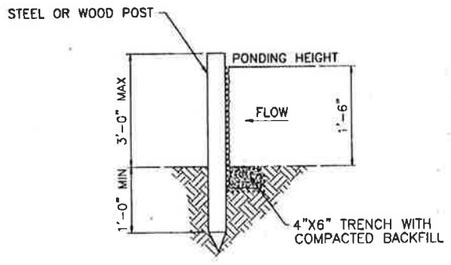
U:\30014785\CAD\CIVIL\TA55-SST\dwg\101225-C-1002-R2.dwg, 06/10/05 09:01 hgonzale



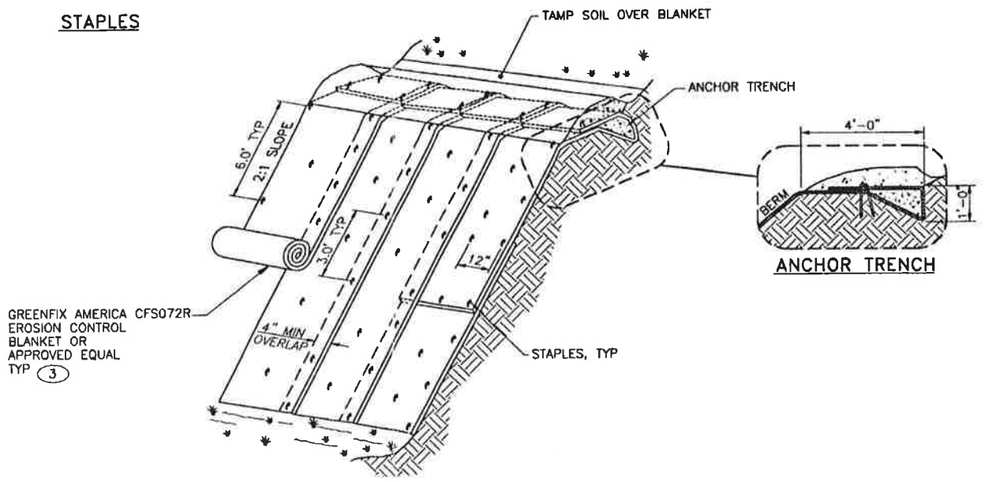
1 C-1002 SILT FENCE DETAIL
SCALE: NONE



STAPLES

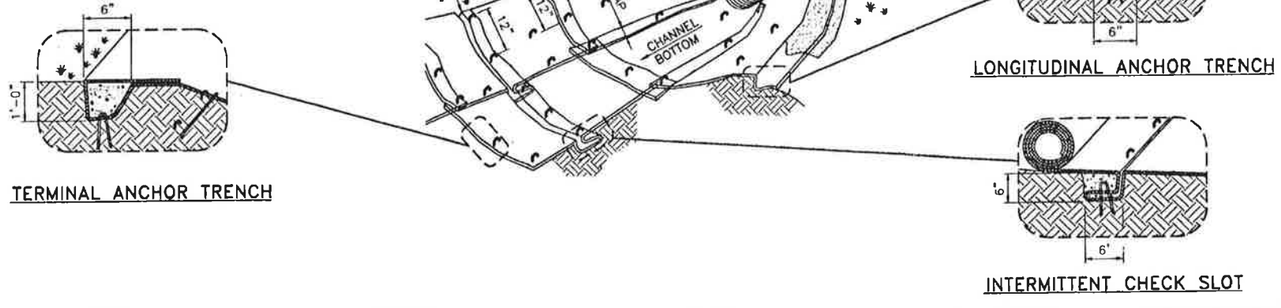


2 C-5001 DETAIL
1" = 1'-0"



ANCHOR TRENCH

3 C-1002 EROSION CONTROL BLANKET AT SLOPE DETAIL
SCALE: NONE



TERMINAL ANCHOR TRENCH

LONGITUDINAL ANCHOR TRENCH

INTERMITTENT CHECK SLOT

4 C-1002 EROSION CONTROL BLANKET AT CHANNEL DETAIL
SCALE: NONE
5

GENERAL NOTES

1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.
2. SILT FENCE SHALL ONLY BE USED ON NON-ASPHALT OR NON-CONCRETE SURFACES WHERE A TRENCH FOR THE LEADING EDGE OF THE FILTER FABRIC CAN BE EXCAVATED.
3. APPLY PERMANENT SEEDING BEFORE PLACING EROSION CONTROL BLANKETS. REFER TO SECTION 02936 OF THE PROJECT SPECIFICATIONS FOR GUIDANCE ON SEED BED PREPARATION, SEED MIX, AND APPLICATION RATE OF SEED.
4. SLOPE SURFACES SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS TO ENSURE ADEQUATE SOIL CONTACT.
5. LAY EROSION CONTROL BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
6. BLANKETS SHOULD BE INSTALLED VERTICALLY DOWN THE SLOPE COVERING THE ENTIRE LENGTH OF THE SLOPE. ENSURE THAT THE FULL EXTENT OF THE DISTURBED AREA IS COVERED.

KEYED NOTES

1. 10 FEET MAXIMUM SPACING WITH WIRE SUPPORT FENCE. 6 FEET MAXIMUM SPACING WITHOUT WIRE SUPPORT FENCE.
2. THE ENDS OF THE FENCE SHALL BE TURNED UPHILL.
3. FOLLOW MANUFACTURER'S RECOMMENDATION FOR EROSION CONTROL BLANKET INSTALLATION.
4. USE 12 INCH STAPLES IN ANCHOR TRENCHES AT TOP AND TOE OF THE SLOPE. USE 6 INCH STAPLES ON THE FACE OF THE SLOPE.
5. FOR CHANNEL INSTALLATION USE ANCHOR TRENCH AT DOWNSTREAM AND UPSTREAM ENDS OF PROJECT. UNROLL MATS IN UPSTREAM DIRECTION. INSTALL INTERMITTENT CHECK SLOT AT 25'-0" INTERVALS. ANCHOR AT TOP EDGE OF CHANNEL WITH LONGITUDINAL ANCHOR TRENCH. FOR SLOPE INSTALLATION LONGITUDINAL ANCHOR SLOT, CHECK SLOT, TERMINAL ANCHOR TRENCH NOT REQUIRED.

WARNING

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1	8/10/05	U	RECORD DOCUMENTS.	HFG	HFG	KRC	KRC	JJ

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MERRICK BUILDING QUALITY SOLUTIONS
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(505) 662-0606, Fax (505) 662-3651

TA-55 SST PAD

DETAILS

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	H.GONZALES
CHECKED	T.LEMKE
DATE	3/21/05

SUBMITTED: K. CARR
APPROVED FOR RELEASE: J. JOHNSON

Los Alamos NATIONAL LABORATORY
PO Box 1663
Los Alamos, New Mexico 87545

SHEET C-5001
7 OF 34

CLASSIFICATION U
REVIEWER J. CLARK
DATE 3/21/05

PROJECT ID 101226
DRAWING NO. C53787
REV 1

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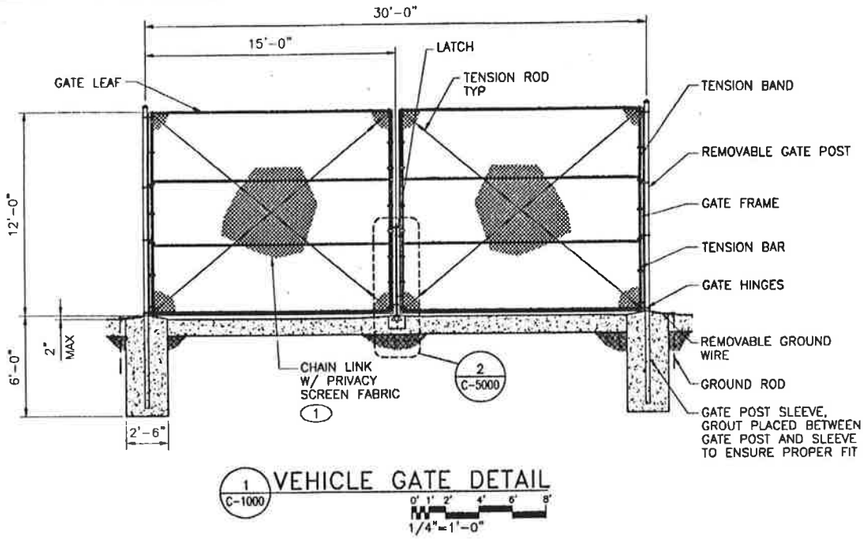
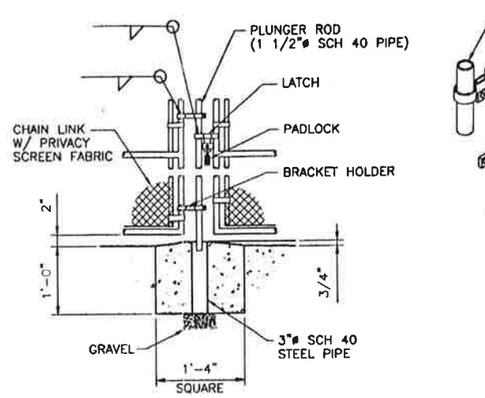
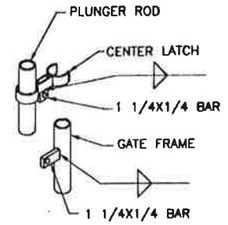


1 C-1000 VEHICLE GATE DETAIL

0' 1' 2' 4' 6' 8'

1/4"=1'-0"





2 C-5000 DETAIL

1' 9" 6" 3" 0 1'

1"=1'-0"

GENERAL NOTES

1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.
2. SURFACE REPAIR DETAIL ONLY REQUIRED IF EXISTING CONCRETE OR ASPHALT IS DAMAGED.

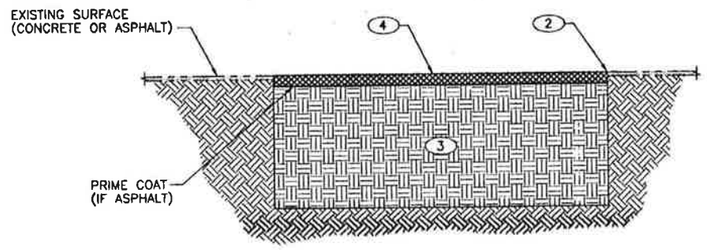
KEYED NOTES

(1) ATTACH PRIVACY SCREEN FABRIC TO CHAIN LINK GATE FRAME PER MANUFACTURERS RECOMMENDATIONS.

(2) REMOVE CONCRETE OR ASPHALT TO NEAT LINES AS REQUIRED TO REMOVE UNSATISFACTORY SUBGRADE.

(3) REMOVE SUBGRADE MATERIAL AS REQUIRED TO ESTABLISH SATISFACTORY SUBGRADE. COMPACT EXISTING GROUND. THEN BACKFILL WITH UNCLASSIFIED BORROW TO WITHIN 10 INCHES OF THE TOP OF THE EXISTING SURFACE, PLACE A MINIMUM OF 6 INCHES CRUSHED TUFF. COMPACT AS SPECIFIED.

(4) INSTALL 4 INCHES OF CONCRETE OR PMBP IN TWO-2 INCH LAYERS (LIFTS) COMPACTED AS REQUIRED.



TYPICAL SURFACE REPAIR DETAIL

SCALE: NONE

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1	6/10/05	U	RECORD DOCUMENTS.	HFG	HFG	JF	KRC	JJ

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MERRICK BUILDING QUALITY SOLUTIONS
800 Sixth Street, Los Alamos, NM 87544
(505) 662-0808, Fax (505) 662-3951

TA-55 SST PAD

DETAILS

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	H.GONZALES
CHECKED	J.FOOTE
DATE	3/21/05

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY
PO Box 1663 Los Alamos, New Mexico 87545

SHEET C-5000

6 OF 34

CLASSIFICATION U | REVIEWER J. CLARK | DATE 3/21/05

PROJECT ID 101226 | DRAWING NO. C53787 | REV 1

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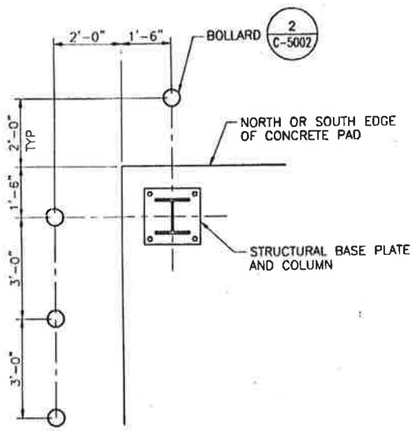
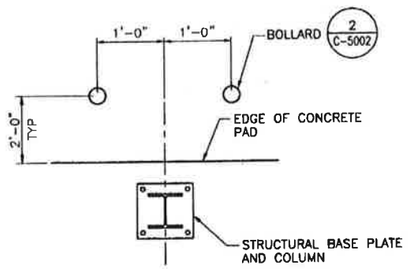


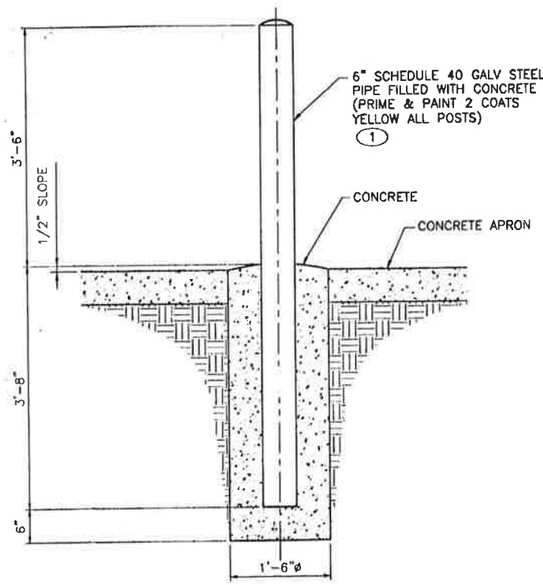
© SLAB CORNER



1 C-1000 BOLLARD PLACEMENT DETAIL

1' 6" 0 1' 2' 3'

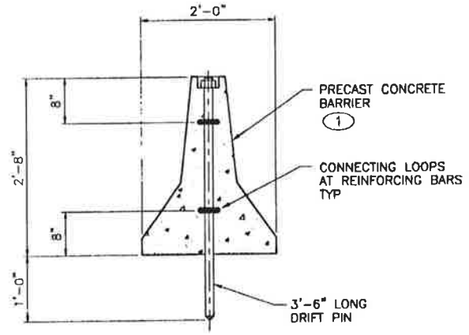
1/2"=1'-0"



2 C-5002 BOLLARD DETAIL

1' 9" 6" 3" 0 1'

1"=1'-0"



CONCRETE BARRIER ANCHORAGE

3 C-1002 DETAIL

1' 9" 6" 3" 0 1'

1"=1'-0"

GENERAL NOTES

1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.

KEYED NOTES

(1) VERIFY LOCATION OF ALL UTILITIES PRIOR TO BOLLARD OR PRECAST CONCRETE BARRIER INSTALLATION.

NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
1	6/10/05	U	RECORD DOCUMENTS.	HFG	HFG	KRC	KRC	JJ

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TA-55 SST PAD

DETAILS

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	H.GONZALES
CHECKED	T.LEMKE
DATE	3/21/06

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY PO Box 1663 Los Alamos, New Mexico 87545

SHEET C-5002

8 OF 34

CLASSIFICATION U

REVIEWER J. CLARK DATE 3/21/06

PROJECT ID 101226

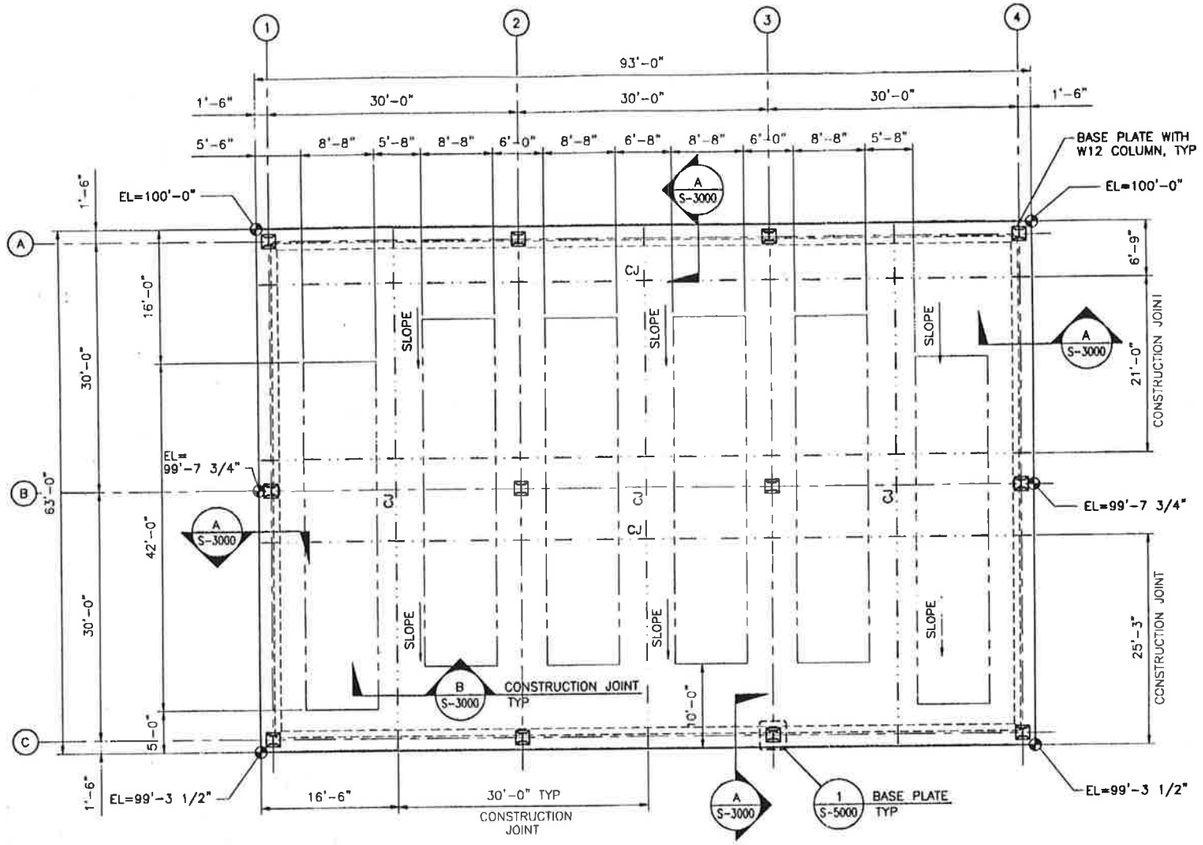
DRAWING NO. C53787

REV 1

u:\30014765\CAD\C-WL\Ta55-SST\dwg\dwg\101226-C-5002-R1.dwg, 06/10/05 @ 09:02 hgonzale

GENERAL NOTES

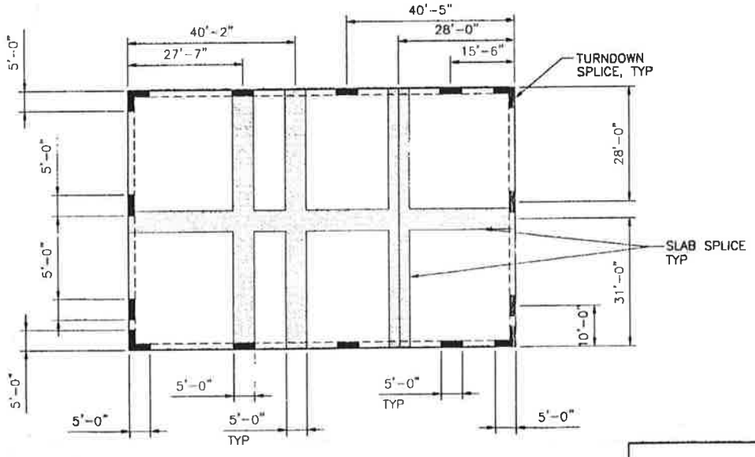
1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.
2. EL 100'-0" = 7312.26'.



CONCRETE SLAB PLAN

4' 2' 0 4' 8' 12'

1/8"=1'-0"



REINFORCEMENT SPLICE LAYOUT

8' 4' 0 8' 16' 24'

1/16"=1'-0"

WARNING

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1	8/10/05	U	RECORD DOCUMENTS.	HFG	HFG	TAL	KRC	JJ

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CONCRETE SLAB PLAN

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	D.ORLOWSKY
CHECKED	A.NEILL
DATE	3/21/05

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

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SHEET S-1000

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CLASSIFICATION U

REVIEWER J. CLARK DATE 3/21/05

PROJECT ID 101226

DRAWING NO. C53787

REV 1

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LEGEND

———	NEW CONSTRUCTION
- - - - -	HIDDEN
———	CENTERLINE
———	EXISTING CONSTRUCTION

LIST OF ABBREVIATIONS

ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
ATR	ALL THREADED ROD
AWS	AMERICAN WELDING SOCIETY
CJ	CONSTRUCTION JOINT
CLR	CLEAR
CONT	CONTINUOUS
℄	CENTERLINE
DIA	DIAMETER
DIAG	DIAGONAL
EL	ELEVATION
EMBED	EMBEDMENT
EQ	EQUAL
ESM	LANL ENGINEERING STANDARDS MANUAL
EW	EACH WAY
FT	FOOT
GALV	GALVANIZED
GFE	GOVERNMENT FURNISHED EQUIPMENT
HEX	HEXAGON
HHCS	HEXAGON HEAD CAP SCREWS
HORIZ	HORIZONTAL
LG	LONG
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MAX	MAXIMUM
MIN	MINIMUM
OC	ON CENTER
OPP	OPPOSITE
OD	OUTER DIAMETER
PL	PLATE
PLCS	PLACES
SCH	SCHEDULE
SIM	SIMILAR
SQ	SQUARE
SST	SECURE STORAGE TRANSPORT
STD	STANDARD
STIFF	STIFFENER
THK	THICK
THRU	THROUGH
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
W/	WITH
WP	WORK POINT
Ø	DIAMETER

GENERAL STRUCTURAL NOTES

GENERAL

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES AND EXISTING CONDITIONS BEFORE PROCEEDING WITH ANY WORK.

ALL SECTIONS AND DETAILS SHALL BE CONSIDERED TYPICAL AND APPLY FOR THE SAME AND SIMILAR SITUATIONS THROUGHOUT THE STRUCTURE, UNLESS OTHERWISE SPECIFICALLY NOTED.

STRUCTURAL DESIGN CRITERIA

1. LANL ENGINEERING STANDARDS MANUAL(ESM), CHAPTER 5, OTS220-03-01-ESM, REV 1, DATED FEBRUARY 09, 2004
2. DOE-STD-1020-2002

STRUCTURAL DESIGN PERFORMANCE CATEGORIES FOR FOLLOWING ITEMS ARE IN ACCORDANCE WITH DOE-STD-1021-93.

FENCING	PC-1
CANOPY FRAMING	PC-2
ELECTRICAL EQUIPMENT ANCHORAGE	PC-2
CONCRETE SLAB	PC-3
LANDING GEAR AND REAR BOOTS	PC-3
TIE-DOWNS	PC-3

PERFORMANCE CATEGORY DESIGN LOADS NOT LISTED FOR NON-AFFECTED ITEMS.

DESIGN ROOF LOADS

MINIMUM LIVE LOAD OF 30 PSF PER ESM, CHAPTER 5
FUTURE DEAD LOAD 5 PSF

DESIGN WIND LOADS

WIND VELOCITY = 90 MPH (PC-1), 96 MPH (PC-2), 117 MPH (PC-3)
EXPOSURE CATEGORY C
IMPORTANCE FACTOR = 1.0

DESIGN SNOW LOADS

PC-2
GROUND SNOW LOAD OF 19 PSF PER ESM, CHAPTER 5
5 PSF ADDITIONAL LOAD FOR RAIN ON SNOW PER ASCE 7-02

SEISMIC DESIGN LOADS

PC-2
SEISMIC CATEGORY D
IMPORTANCE FACTOR I=1.5
SDS = 0.54 SDI = 0.26

PC-3
PGA = 0.34G USING LANL ESM RESPONSE SPECTRA

CONCRETE

CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR TYPE II, AGGREGATES SHALL CONFORM TO ASTM C33. CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF f'c = 4000 psi IN 28 DAYS.

ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS MUST FOLLOW THE LATEST ACI CODE AND THE LATEST ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".

REINFORCING STEEL SHALL BE 60,000 PSI ASTM A-615.

NO TACK WELDING OF REINFORCING SHALL BE PERMITTED.

ALL CONCRETE SHALL BE AIR-ENTRAINED (5% ± 1%).

PROVIDE 3/4" X 45° CHAMFER AT ALL EXPOSED EDGES.

CONCRETE FINISH SHALL BE WITH A LIGHT BROOM FINISH.

	MINIMUM COVER (IN.)
1. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3
2. CONCRETE EXPOSED TO EARTH OR WEATHER #6 THROUGH #8 BARS: #5 BAR AND SMALLER:	 2 1 1/2

LAP SPLICE LENGTH FOR #6 BARS IS 58 INCHES.

LAP SPLICE LENGTH FOR #7 BARS IS 46 INCHES.

GENERAL STRUCTURAL NOTES (CONT'D)

STRUCTURAL STEEL

MATERIALS: (UNLESS OTHERWISE NOTED)

STRUCTURAL STEEL WIDE FLANGE SHAPES	ASTM A992
STRUCTURAL STEEL ANGLES AND PLATES	ASTM A36
BOLTS	
3/8"ø	ASTM A307
3/4"ø and 1"ø	ASTM A325
NUTS	ASTM A563
WASHERS	ASTM F436
WELDING ELECTRODE	ASTM E70XX LOW HYDROGEN
ANCHOR BOLTS, CAST IN PLACE	ASTM F1554, GRADE 36
ANCHOR BOLTS, POST INSTALLED, DRILLCO MAXI-BOLTS	ASTM A193, GRADE B7

DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO CURRENT "AMERICAN INSTITUTE OF STEEL CONSTRUCTION" SPECIFICATION AND CODE OF STANDARD PRACTICE.

ALL WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY AWS D1.1 "STRUCTURAL WELDING CODE - STEEL."

ALL STEEL SHALL BE PAINTED RED PRIMER OFF-SITE BEFORE INSTALLATION. AFTER INSTALLATION TOUCH-UP DAMAGED AREAS WITH RED PRIMER.

USE TURN-OF-THE-NUT PRETENSIONING METHOD TO TIGHTEN BOLTS. AFTER OBTAINING A SNUG-TIGHT CONDITION (MATCH MARKING THE NUT AND PROTRUDING END OF THE BOLT MAY BE HELPFUL AFTER SNUG-TIGHTENING), FURTHER TURNING OF THE NUT (OR BOLT) IS REQUIRED AS FOLLOWS:

BOLT LENGTH NOT MORE THAN 4 X BOLT DIAMETER: 1/3 TURN.

BOLT LENGTH MORE THAN 4 X BOLT DIAMETER BUT LESS THAN 8 X BOLT DIAMETER: 1/2 TURN.

ANCHOR BOLTS

POST INSTALLED ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

METAL ROOF DECK

METAL ROOF DECK SHALL BE 22 GAGE FABRAL MIGHTI-RIB PBR FABRICATED FROM COLD FORMED STEEL CONFORMING WITH ASTM A 653 SS, GRADE 40, WITH G90 GALVANIZED COATING.

METAL ROOF DECK SHALL BE DETAILED AND FABRICATED TO SPAN 3 OR MORE SUPPORTS.

METAL ROOF DECK SHALL BE ATTACHED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS USING 2 SCREWS (#12-24, TEK 5) PER VALLEY AT ALL SUPPORTS, AND SIDE LAP FASTENERS (#10) AT 9" O.C. ALL FASTENERS SHALL HAVE BONDED WASHER.

WARNING

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NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
1	6/10/05	U	RECORD DOCUMENTS.	HFG	HFG	TAL	KRC	JJ

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(505) 662-0808 Fax (505) 662-3651

TA-55 SST PAD

LEGEND, ABBREVIATIONS AND GENERAL STRUCTURAL NOTES

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	A.NEILL
CHECKED	D.ORLOWSKY
DATE	3/21/05

SUBMITTED K. CARR
APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY
PO Box 1663 Los Alamos, New Mexico 87545

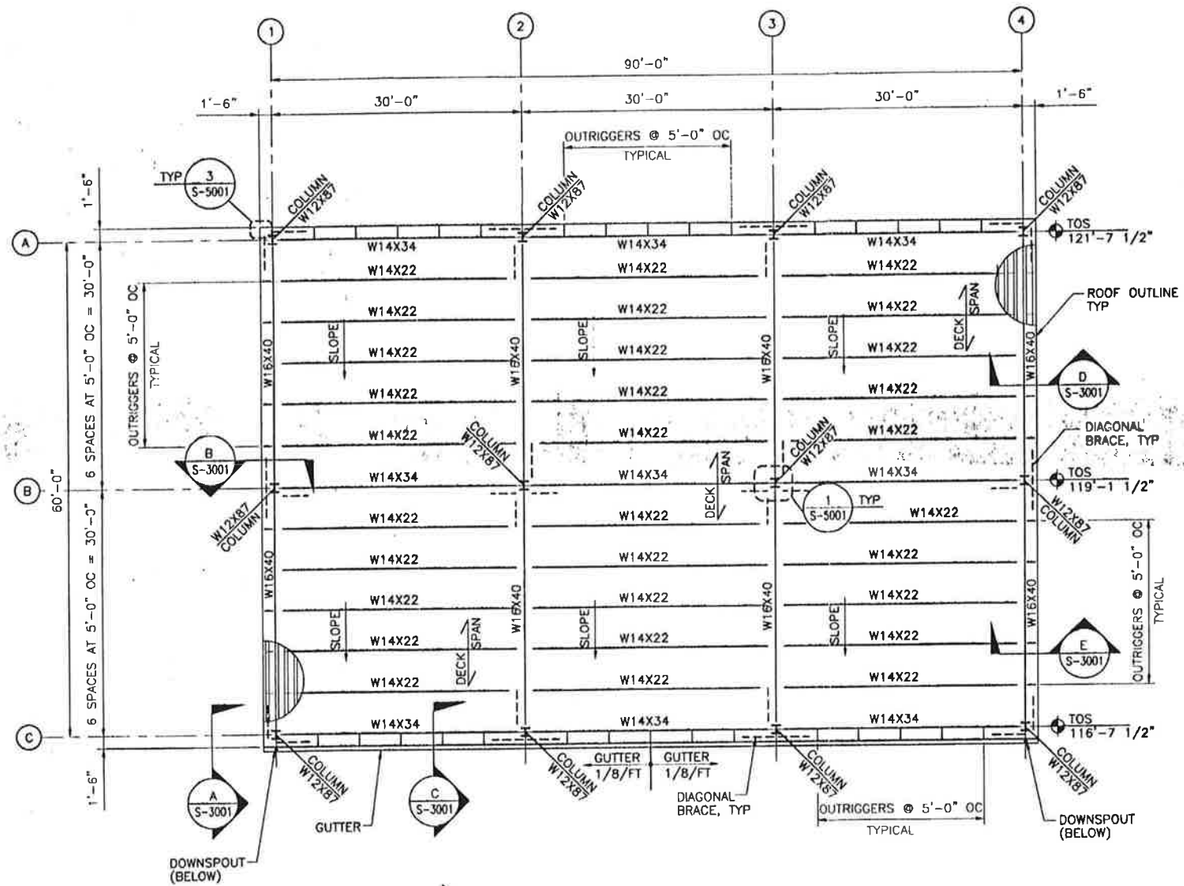
SHEET S-0001
9 OF 34

CLASSIFICATION U
REVIEWER J. CLARK DATE 3/21/05
PROJECT ID 101226
DRAWING NO. C53787 REV 1

U:\30014765\CAD\STRUCT\101226-S-0001-R1.DWG, 06/10/05 @ 09:05 hgonzale

GENERAL NOTES

1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.



CANOPY FRAMING PLAN

1/8"=1'-0"

WARNING

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1	6/10/05	U	RECORD DOCUMENTS.	HFG	HFG	TAL	KRC	JJ

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TA-55 SST PAD

CANOPY FRAMING PLAN

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	A.NEILL
CHECKED	D.ORLOWSKY
DATE	3/21/05

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

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SHEET S-1001

11 OF 34

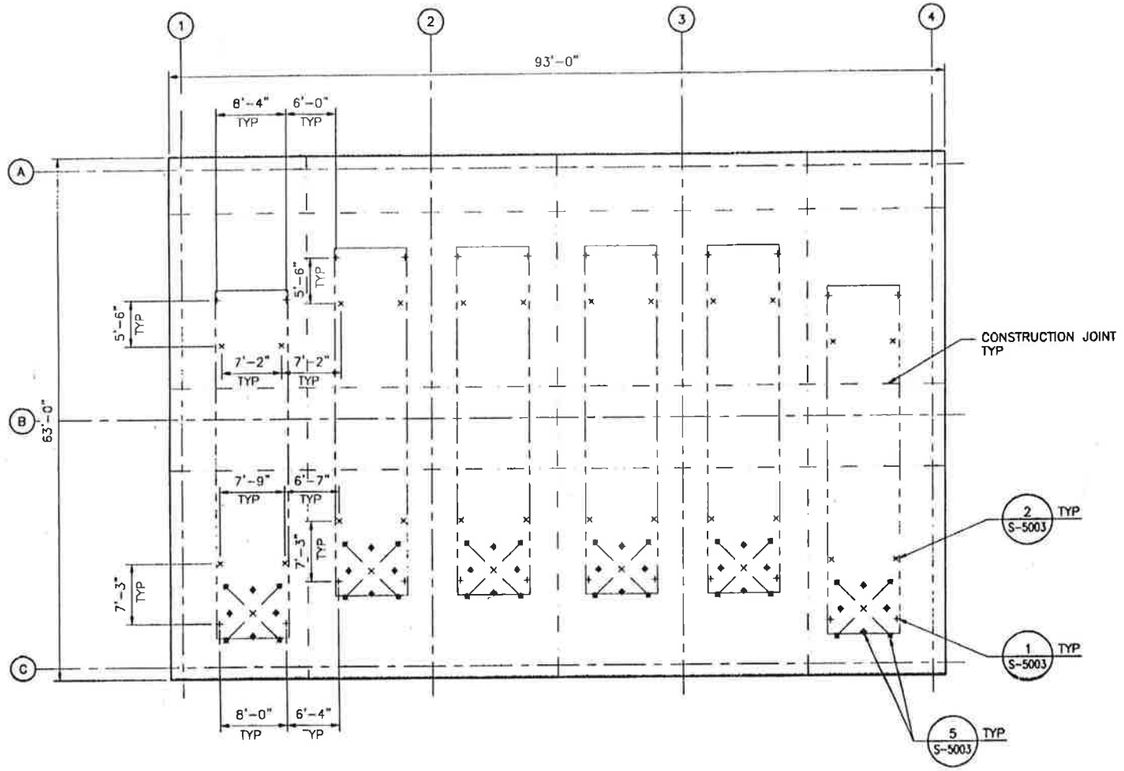
CLASSIFICATION U REVIEWER J. CLARK DATE 3/21/05

PROJECT ID 101226 DRAWING NO. C53787 REV 1

☆\30014765\CAD\STRUCT\101226-S-1001-R1.DWG, 06/10/05 @ 09:07 hgonzale

GENERAL NOTES

1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.
2. FOR TIE-DOWN ANCHORAGE ON SST'S, SEE SHEET S-5003. TIE-DOWN ANCHORAGE IS TO BE INSTALLED ONCE SST'S ARE IN THIER FINAL LEVELED POSITION ON THE CONCRETE PAD.
3. DIMENSIONS FOR ANCHORAGE ARE SHOWN AS REFERENCE. FINAL POSITION FOR SST'S WILL DETERMINE DIMENSIONS FOR SLAB ANCHORAGE.



TRAILER TIE-DOWN ANCHOR LOCATION PLAN

4' 2' 0 4' 8' 12'
1/8"=1'-0"

WARNING

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NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
2	6/10/05	U	RECORD DOCUMENTS.	HFG	HFG	TAL	KRC	JJ
1	4/22/05	U	DCN-003: ADDED KING PIN SUPPORT.	HFG	JWC	TAL	KRC	JJ

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TA-55 SST PAD

TRAILER TIE-DOWN ANCHOR LOCATION PLAN

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	D.ORLOWSKY
CHECKED	A.NEILL
DATE	3/21/06

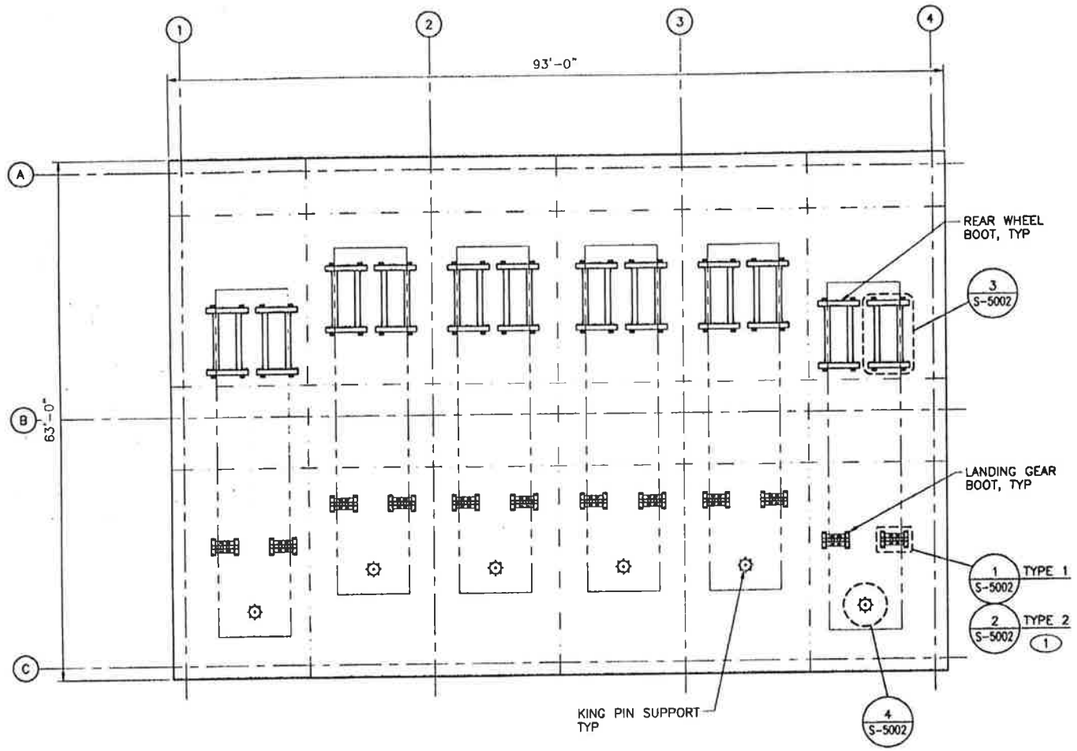
SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY
PO Box 1663 Los Alamos, New Mexico 87545

SHEET S-1002
12 OF 34

CLASSIFICATION U
REVIEWER J. CLARK
DATE 3/21/05
PROJECT ID 101226
DRAWING NO. C53787
REV 2



TIE-DOWN BOOT LOCATION PLAN

4' 2' 0 4' 8' 12'

1/8"=1'-0"

GENERAL NOTES

1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.
2. LOCATION FOR BOOTS SHALL BE DETERMINED ONCE SST'S ARE IN THEIR FINAL POSITION ON THE SLAB.
3. INSTALL SHIMS AND/OR CHOCKS FOR THE BOOTS TO PROVIDE A SNUG FIT WITH NO GAPS BETWEEN THE BOOT AND THE TIRE OR LANDING GEAR.

KEYED NOTES

(1) FIELD VERIFY BOOT TYPE TO BE USED WHEN SST'S ARE IN POSITION.

NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
2	6/10/05	U	RECORD DOCUMENTS.	HFG	HFG	TAL	KRC	JJ
1	4/22/05	U	DCN-003: ADDED KING PIN SUPPORT.	HFG	JWC	TAL	KRC	JJ

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TA-55 SST PAD

TIE-DOWN BOOT LOCATION PLAN

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	D.ORLOWSKY
CHECKED	A.NEILL
DATE	3/21/05

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

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PO Box 1663 Los Alamos, New Mexico 87545

SHEET S-1003

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CLASSIFICATION U

REVIEWER J. CLARK DATE 3/21/05

PROJECT ID 101226

DRAWING NO. C53787

REV 2

WARNING

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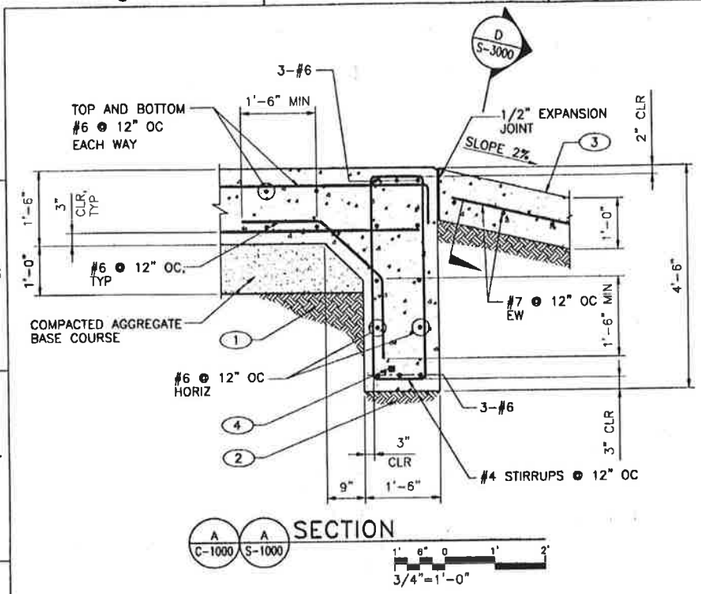
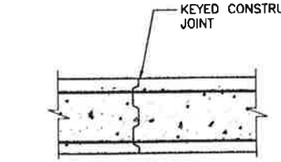
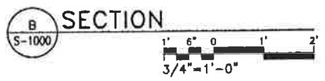
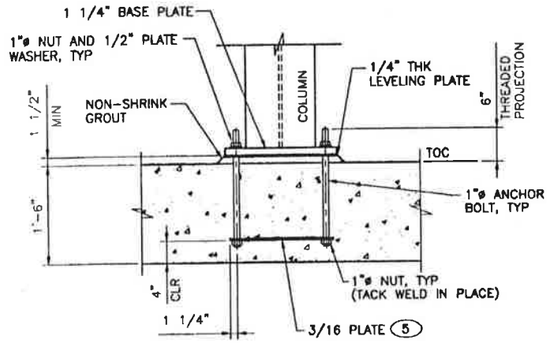
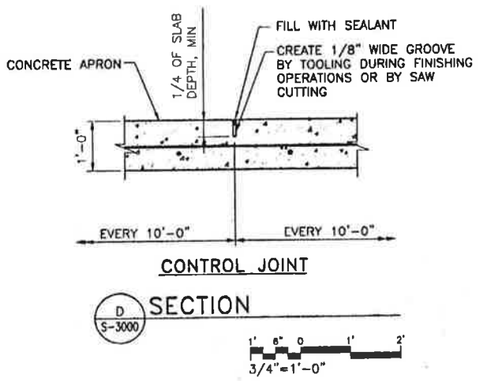




CONSTRUCTION JOINT







CONTROL JOINT

GENERAL NOTES

1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.

KEYED NOTES

(1) EXCAVATE TO THE SUBGRADE ELEVATIONS INDICATED IN THE AREAS UNDERNEATH MAIN CONCRETE PAD, REMOVE ALL SOILS DOWN TO TUFF. BACKFILL AS REQUIRED WITH EXCAVATED TUFF TO MEET SUBGRADE ELEVATIONS. INSTALL 1'-0" OF AGGREGATE BASE COURSE. COMPACT FILL AND BASE COURSE TO 95% DENSITY AS DETERMINED BY ASTM D1557. MAINTAIN MOISTURE CONTENT AT OPTIMUM TO ±2%.

(2) EXCAVATE TO THE SUBGRADE ELEVATIONS INDICATED IN THE AREAS UNDERNEATH THE TURNDOWN FOOTER, REMOVE ALL SOILS DOWN TO TUFF. BACKFILL WITH FLOWABLE FILL (LEAN CONCRETE 300-500 PSI) OR EXTEND FOOTER TO TUFF.

(3) PROVIDE CONTROL JOINTS FOR 12" THK CONCRETE APRON EVERY 10'-0". SEE SECTION D, THIS SHEET.

(4) #4/0 BARE COPPER MAIN GROUND ELECTRODE CONDUCTOR. SEE ELECTRICAL FOR DETAILS AND STUB-UP LOCATIONS.

(5) NOTCH AS NECESSARY TO FIT AROUND REBAR.

NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
1	8/10/05	U	RECORD DOCUMENTS.	HFG	HFG	TAL	KRC	JJ

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TA-55 SST PAD

CONCRETE SLAB SECTIONS

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	D.ORLOWSKY
CHECKED	A.NEILL
DATE	3/21/05

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY PO Box 1663 Los Alamos, New Mexico 87545

SHEET S-3000

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CLASSIFICATION U | REVIEWER J. CLARK | DATE 3/21/05

PROJECT ID 101226 | DRAWING NO. C53787 | REV 1

WARNING

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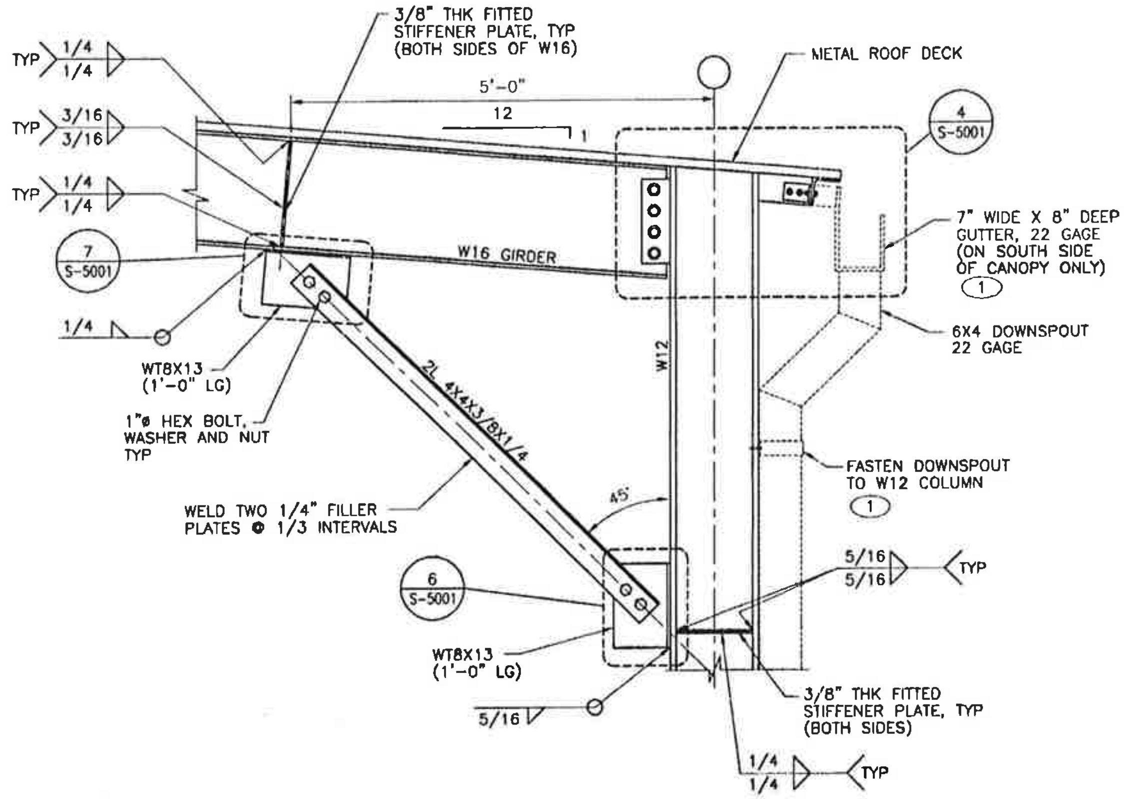
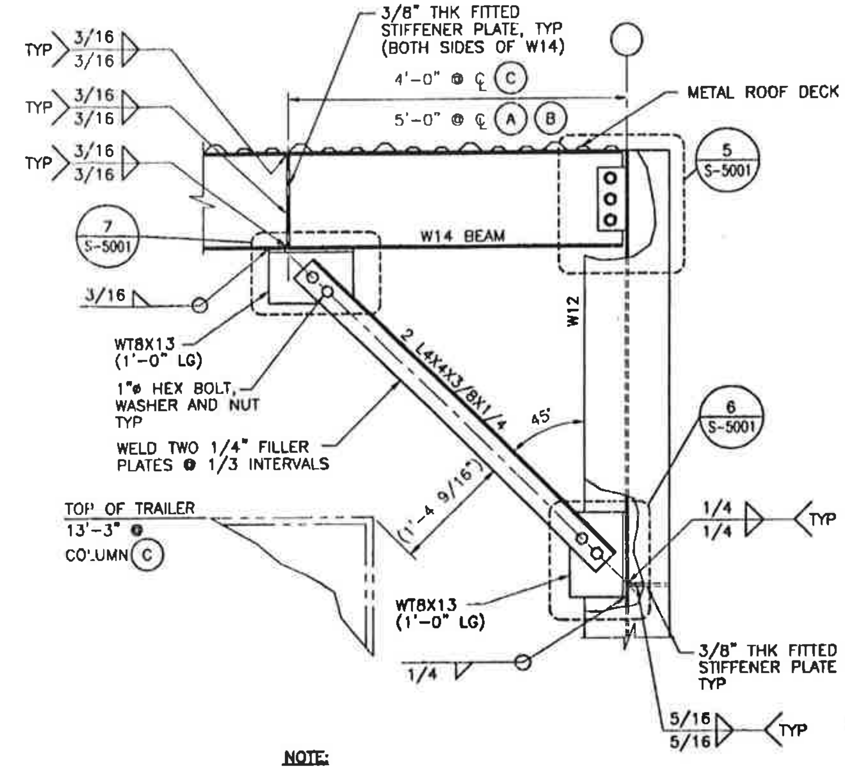
8 | 7 | 6 | 5 | 4 | 3 | 2 | 1



A S-1001 SECTION

1' 9" 6" 3" 0 1'
1"=1'-0"



NOTE:

1. OUTRIGGER NOT SHOWN FOR CLARITY.
2. DIAGONAL BRACE IN PLANE OF COLUMN WEB NOT SHOWN FOR CLARITY.

B S-1001 SECTION

1' 9" 6" 3" 0 1'
1"=1'-0"

GENERAL NOTES

1. IF THIS SHEET IS NOT 36X24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.

KEYED NOTES

(1) INSTALL GUTTER AND DOWNSPOUT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

WARNING

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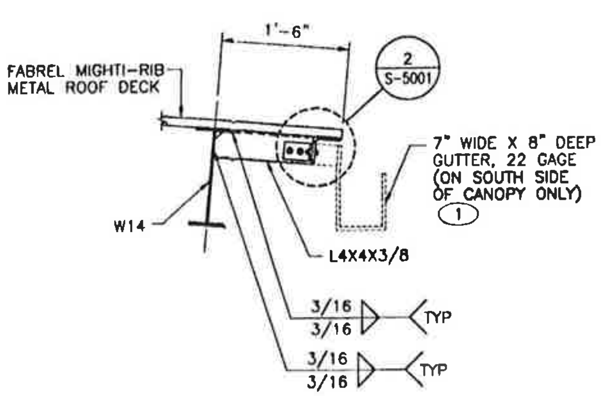
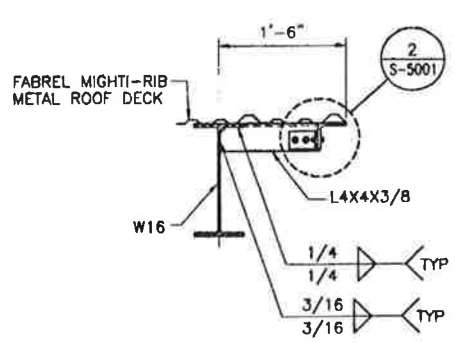


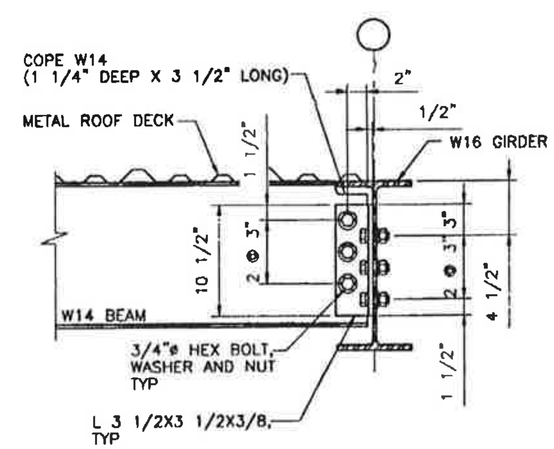
C S-1001 SECTION

1' 9" 6" 3" 0 1'
1"=1'-0"



D S-1001 SECTION

1' 9" 6" 3" 0 1'
1"=1'-0"



NOTE:

1. OUTRIGGER NOT SHOWN FOR CLARITY.

BEAM TO GIRDER

E S-1001 SECTION

4" 0 6" 1'
1 1/2"=1'-0"

NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
1	6/10/05	U	RECORD DOCUMENTS.	HFG	HFG	TAL	KRC	JJ

DMJMH+N, Inc.

MERRICK® BUILDING QUALITY SOLUTIONS
600 Sixth Street, Los Alamos, NM, 87544 (505) 662-0606, Fax (505) 662-3881

TA-55 SST PAD

CANOPY FRAMING SECTIONS

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	A.NEILL
CHECKED	D.ORLOWSKY
DATE	3/21/05

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY
PO Box 1663 Los Alamos, New Mexico 87545

SHEET S-3001

15 OF 34

CLASSIFICATION U

REVIEWER J. CLARK

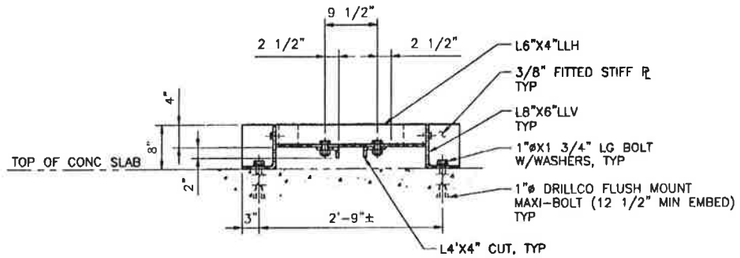
DATE 3/21/05

PROJECT ID 101226

DRAWING NO. C53787

REV 1

\30014765\CAD\STRUC\101226-S-3001-R1.DWG, 06/10/05 @ 09:06 hgonzale



TYPE 1
(1)

A S-5002 SECTION

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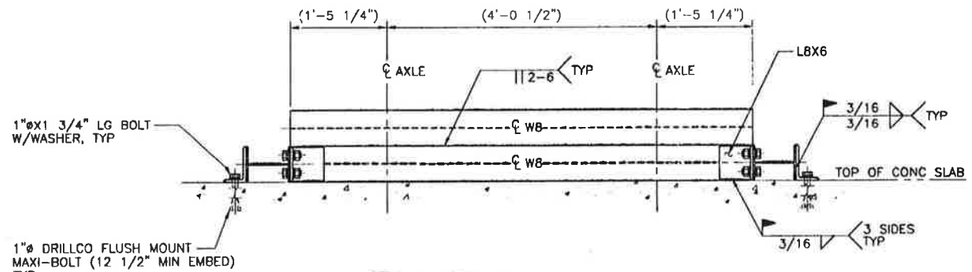
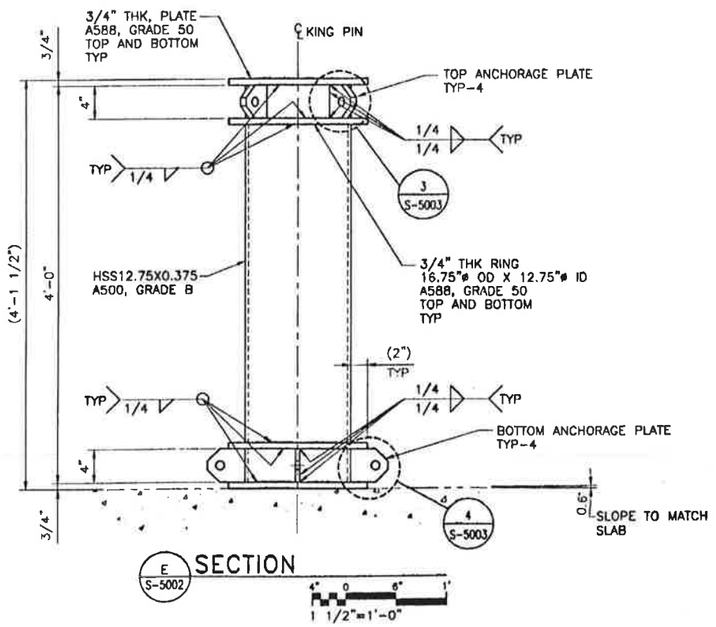
1"=1'-0"



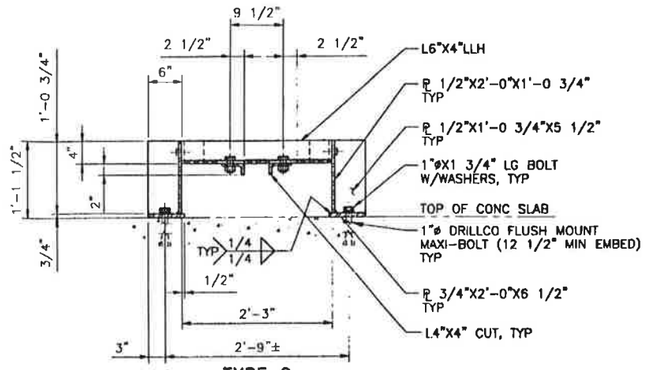
C S-5002 SECTION

1' 9" 6" 3" 0 1'
1"=1'-0"



E S-5002 SECTION

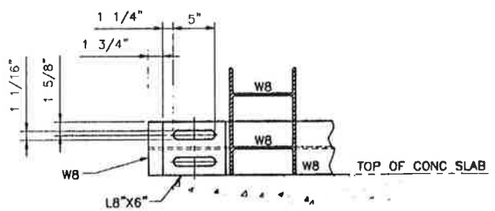
4" 0 8" 1'
1 1/2"=1'-0"



TYPE 2
(1)

B S-5002 SECTION

1' 9" 6" 3" 0 1'
1"=1'-0"



NOTE:
BOLTS NOT SHOWN FOR CLARITY.

D S-5002 SECTION

4" 0 8" 1'
1 1/2"=1'-0"

GENERAL NOTES

1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.
2. INSTALL SHIMS AND/OR CHOCKS FOR THE BOOTS TO PROVIDE A SNUG FIT WITH NO GAPS BETWEEN THE BOOT AND THE TIRE OR LANDING GEAR.

KEYED NOTES

(1) FIELD VERIFY BOOT TYPE TO BE USED WHEN SST'S ARE IN POSITION.

WARNING

THESE RECORD DOCUMENTS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. THE CONSULTANT HAS NOT VERIFIED THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY BE INCORPORATED AS A RESULT OF ERRONEOUS INFORMATION PROVIDED BY OTHERS.

NO.	DATE	CLASS REV	DESCRIPTION	OWN	VER	CHKD	SUB	APP
2	8/10/05	U	RECORD DOCUMENTS.	HFG	HFG	TAL	KRC	JJ
1	4/22/05	U	DCN-003: ADDED KING PIN SUPPORT.	HFG	JWC	TAL	KRC	JJ

DMJMH+N, Inc.

MERRICK BUILDING QUALITY SOLUTIONS
800 Sixth Street, Los Alamos, NM, 87544 (505) 662-0606, Fax (505) 662-3851

TA-55 SST PAD

LANDING GEAR AND REAR WHEEL BOOT SECTIONS

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	D.ORLOWSKY
CHECKED	A.NEILL
DATE	3/21/05

SUBMITTED K. CARR

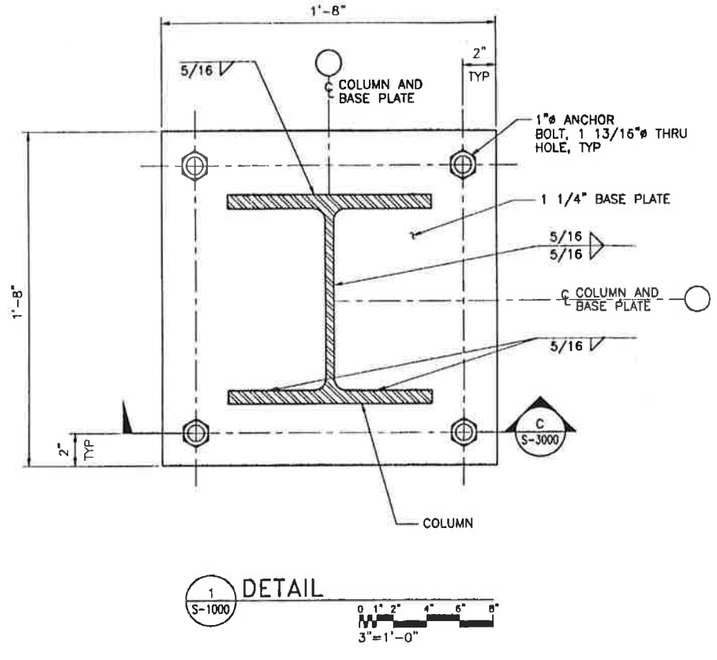
APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY
PO Box 1663 Los Alamos, New Mexico 87545

SHEET S-3002
16 OF 34

CLASSIFICATION U | REVIEWER J. CLARK | DATE 3/21/05

PROJECT ID 101226 | DRAWING NO. C53787 | REV 2



1 S-1000 DETAIL

3"=1'-0"

GENERAL NOTES

1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.

WARNING

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NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
1	6/10/05	U	RECORD DOCUMENTS.	HFG	HFG	TAL	KRC	JJ

DMJMH+N, Inc.

MERRICK BUILDING QUALITY SOLUTIONS
800 Park Street, Los Alamos, NM, 87544
(505) 662-0606, Fax (505) 662-3851

TA-55 SST PAD

CONCRETE SLAB DETAILS

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	A.NEILL
CHECKED	D.DRLOWSKY
DATE	3/21/05

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY PO Box 1663 Los Alamos, New Mexico 87545

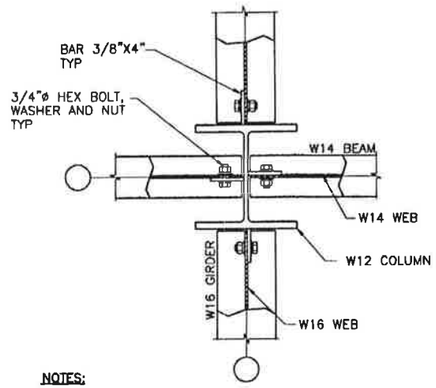
SHEET S-5000

17 OF 34

CLASSIFICATION U | REVIEWER J. CLARK | DATE 3/21/05

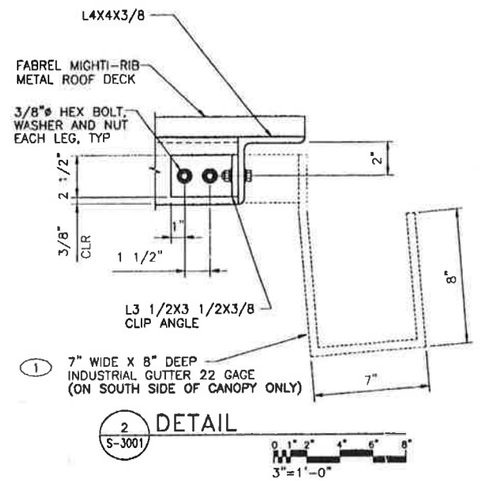
PROJECT ID 101226 | DRAWING NO. C53787 | REV 1

J:\30014763\CAD\STRUCT\101226-S-5000-R1.DWG, 06/10/05 @ 09:06 ngonzale

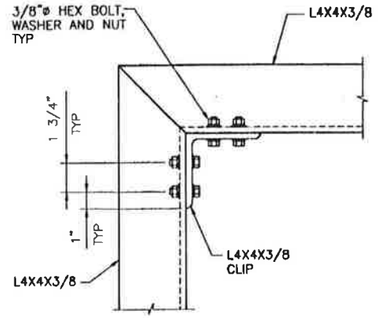


NOTES:
1. METAL DECKING NOT SHOWN FOR CLARITY.
2. TOP FLANGES OF W16 AND W14 NOT SHOWN FOR CLARITY.

1 S-1001 DETAIL
1 1/2"=1'-0"



2 S-3001 DETAIL
3"=1'-0"



NOTES:
1. METAL DECKING NOT SHOWN FOR CLARITY.

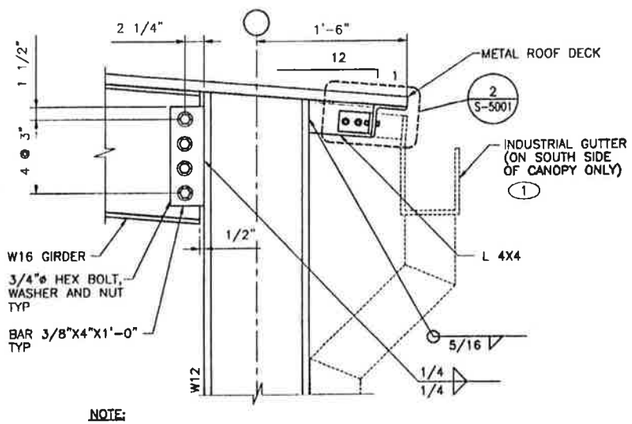
3 S-1001 DETAIL
3"=1'-0"

GENERAL NOTES

1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.

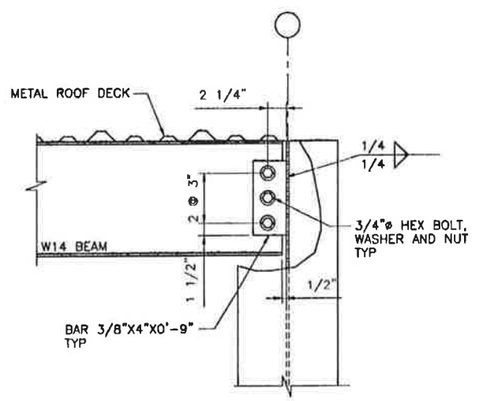
KEYED NOTES

(1) INSTALL GUTTER AND DOWNSPOUT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

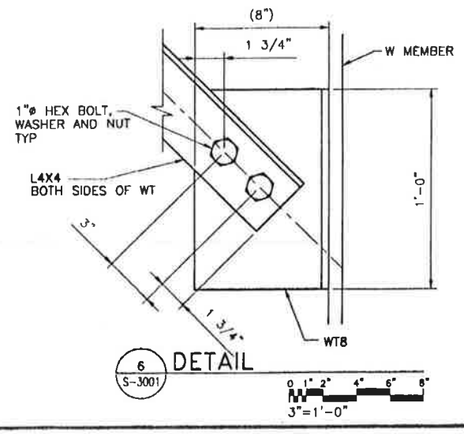


NOTE:
1. KNEE BRACE NOT SHOWN FOR CLARITY.

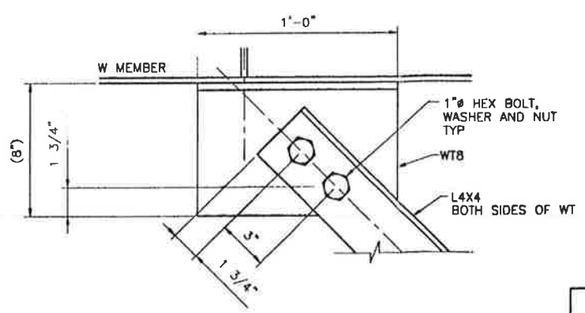
4 S-3001 DETAIL
1 1/2"=1'-0"



5 S-3001 DETAIL
1 1/2"=1'-0"



6 S-3001 DETAIL
3"=1'-0"



7 S-3001 DETAIL
3"=1'-0"

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NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
1	8/10/05		RECORD DOCUMENTS.	HFG	HFG	TAL	KRC	JJ

DMJMH+N, Inc.

MERRICK BUILDING QUALITY SOLUTIONS
800 Sixth Street, Los Alamos, NM, 87544 (505) 662-0004, Fax (505) 662-3851

TA-55 SST PAD

CANOPY FRAMING DETAILS

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	A.NEILL
CHECKED	D.ORLOWSKY
DATE	3/21/05

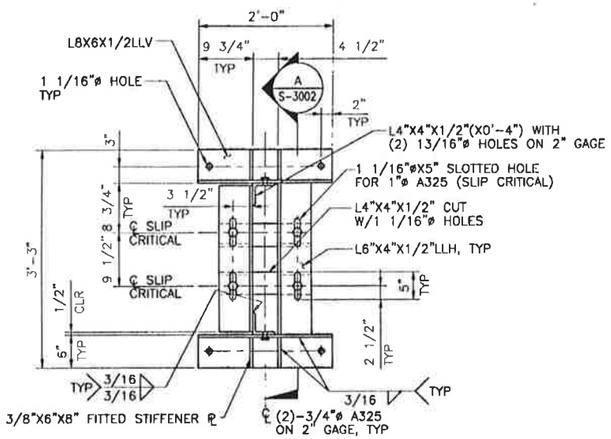
SUBMITTED K. CARR
APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY
PO Box 1663 Los Alamos, New Mexico 87545

SHEET S-5001
18 OF 34

CLASSIFICATION U
REVIEWER J. CLARK
DATE 3/21/05
PROJECT ID 101226
DRAWING NO. C53787
REV 1

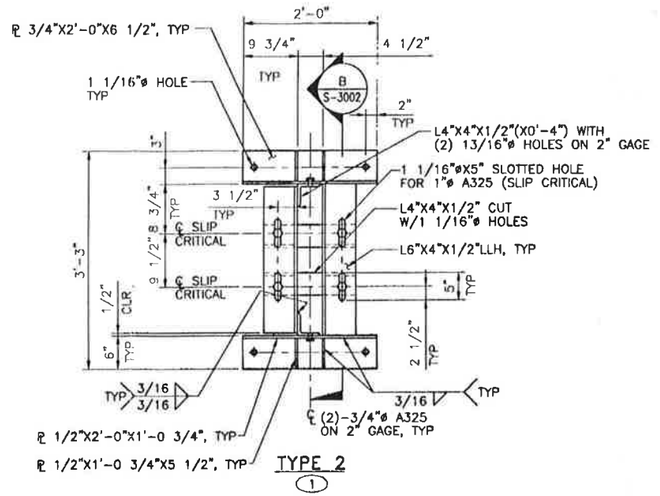
U:\50014765\CAD\STRUCT\101226-S-5001-R1.DWG, 08/10/05 @ 09:05 hgonzale



TYPE 1
(1)

1 S-1003 LANDING GEAR BOOT DETAIL

1' 9" 6" 3" 0 1'
1"=1'-0"



TYPE 2
(1)

2 S-1003 LANDING GEAR BOOT DETAIL

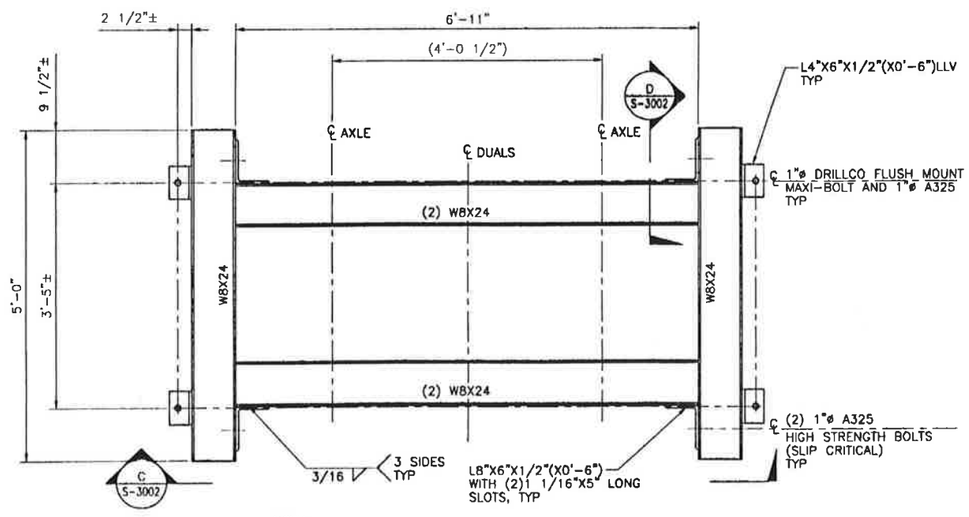
1' 9" 6" 3" 0 1'
1"=1'-0"

GENERAL NOTES

1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.
2. INSTALL SHIMS AND/OR CHOCKS FOR THE BOOTS TO PROVIDE A SNUG FIT WITH NO GAPS BETWEEN THE BOOT AND THE TIRE OR LANDING GEAR.

KEYED NOTES

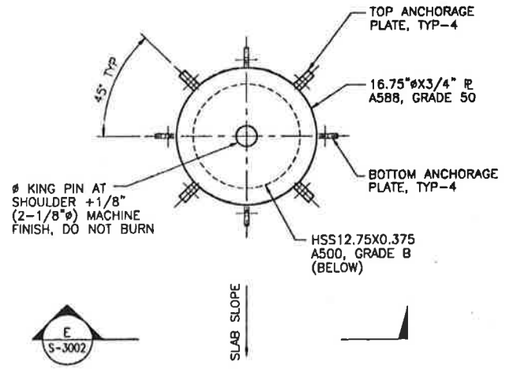
(1) FIELD VERIFY BOOT TYPE TO BE USED WHEN SST'S ARE IN POSITION.



NOTE:
BOLTS AND FASTENING HARDWARE NOT SHOWN FOR CLARITY.

3 S-1003 REAR WHEEL BOOT DETAIL

1' 9" 6" 3" 0 1'
1"=1'-0"



4 S-1003 KING PIN SUPPORT DETAIL

4" 0 6" 1'
1 1/2"=1'-0"

WARNING

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NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
2	6/10/05	U	RECORD DOCUMENTS.	HFG	HFG	TAL	KRC	JJ
1	4/22/05	U	DCN-003: ADDED KING PIN SUPPORT.	HFG	JWC	TAL	KRC	JJ

DMJMH+N, Inc.

MERRICK BUILDING QUALITY SOLUTIONS
500 Marquette NW, Suite 1000, Albuquerque, NM 87102
(505) 842-0606, Fax (505) 842-1951

TA-55 SST PAD

LANDING GEAR AND REAR WHEEL BOOT DETAILS

BLDG 355 TA-55

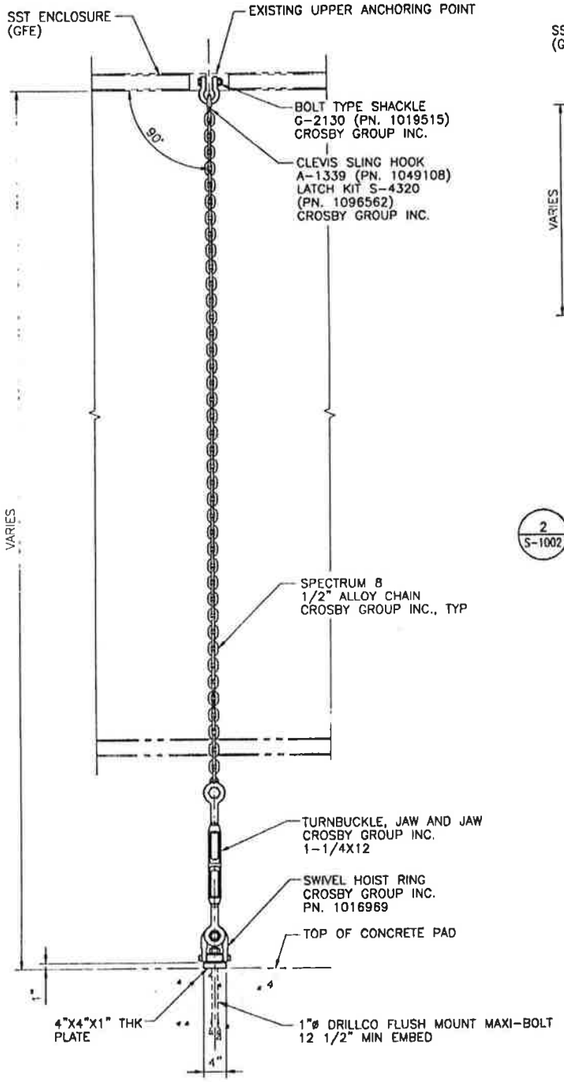
DRAWN	H.GONZALES
DESIGN	D.ORLOWSKY
CHECKED	A.NEALL
DATE	3/21/05

SUBMITTED K. CARR
APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY
PO Box 1663 Los Alamos, New Mexico 87545

SHEET S-5002
19 OF 34

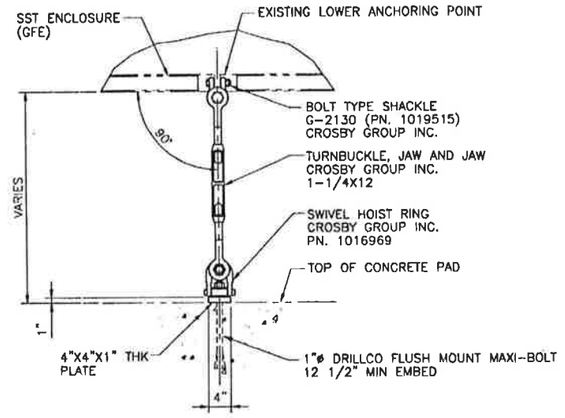
CLASSIFICATION U
REVIEWER J. CLARK DATE 3/21/05
PROJECT ID 101226
DRAWING NO. C53787 REV 2



NOTE:
FOUR (4) SETS REQUIRED PER SST ENCLOSURE.

1 S-1002 UPPER TIE-DOWN ANCHORAGE DETAIL

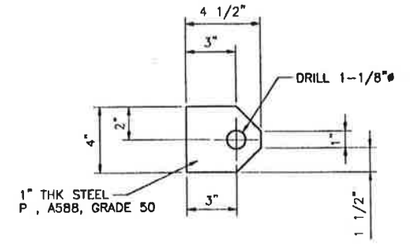
1' 9" 6" 3" 0 1'
1"=1'-0"



NOTE:
FOUR (4) SETS REQUIRED PER SST ENCLOSURE.

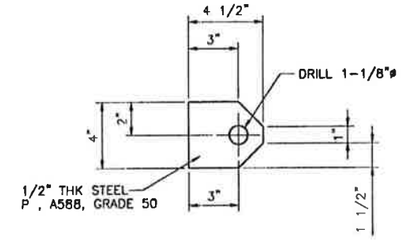
2 S-1002 LOWER TIE-DOWN ANCHORAGE DETAIL

1' 9" 6" 3" 0 1'
1"=1'-0"



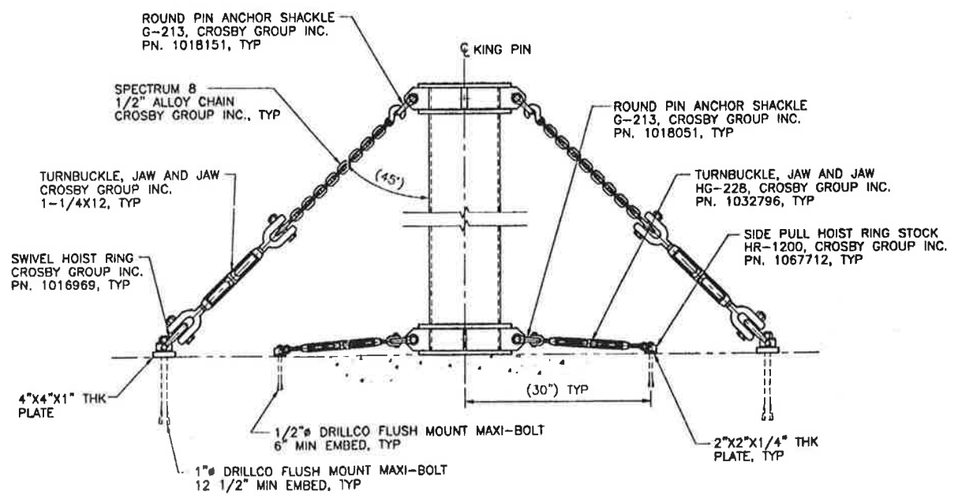
3 S-3002 TOP ANCHORAGE PLATE DETAIL

0 1" 2" 4" 6" 8"
3"=1'-0"



4 S-3002 BOTTOM ANCHORAGE PLATE DETAIL

0 1" 2" 4" 6" 8"
3"=1'-0"



NOTE:
1. BOTTOM OF KING PIN SUPPORT ROTATED 45° FOR CLARITY.

5 S-1002 KING PIN ANCHORAGE DETAIL

1' 9" 6" 3" 0 1'
1"=1'-0"

GENERAL NOTES

1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.
2. ANCHORAGE TO BE INSTALLED ONCE SST'S ARE IN THIER FINAL LEVELED POSITION ON THE CONCRETE PAD.
3. USE BOTTOM TURNBUCKLES FOR EXACT POSITIONING UNDER KING PIN.

NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
2	6/10/05	R U	RECORD DOCUMENTS.	HFG	HFG	TAL	KRC	JJ
1	4/22/05	U	DCN-003: ADDED KING PIN SUPPORT.	HFG	JWC	TAL	KRC	JJ

DMJMH+N, Inc.

MERRICK BUILDING QUALITY SOLUTIONS
800 Wilshire Blvd., Los Angeles, CA. 90017
(800) 642-0606, Fax (800) 642-3601

TA-55 SST PAD

TIE-DOWN ANCHORAGE DETAILS

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	D.ORLOWSKY
CHECKED	A.NEILL
DATE	3/21/05

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY
PO Box 1663 Los Alamos, New Mexico 87545

SHEET S-5003

20 OF 34

CLASSIFICATION U

REVIEWER J. CLARK DATE 3/21/05

PROJECT ID 101226

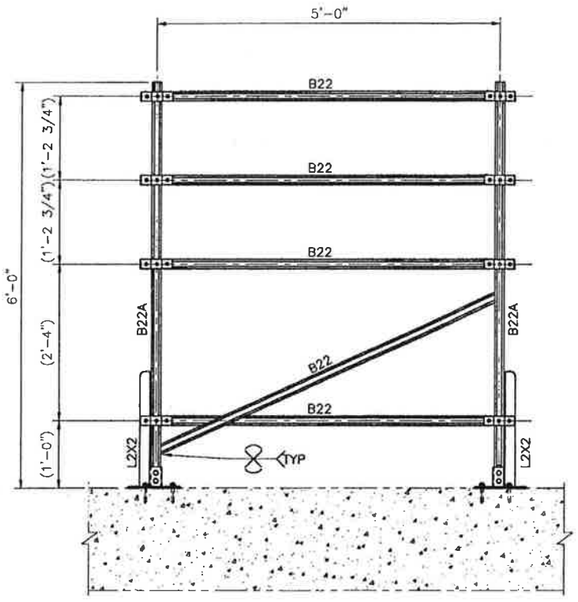
DRAWING NO. C53787

REV 2

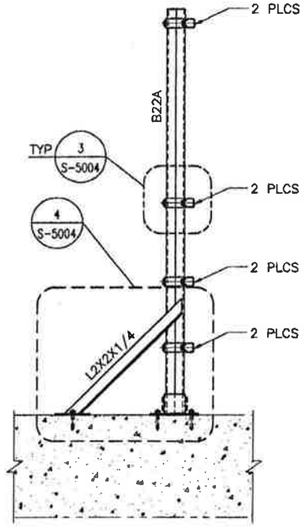
U:\3001765\CAD\STRUCT\101226 S-5003-R2.DWG, 05/10/05 @ 09:48 hportzis

GENERAL NOTES

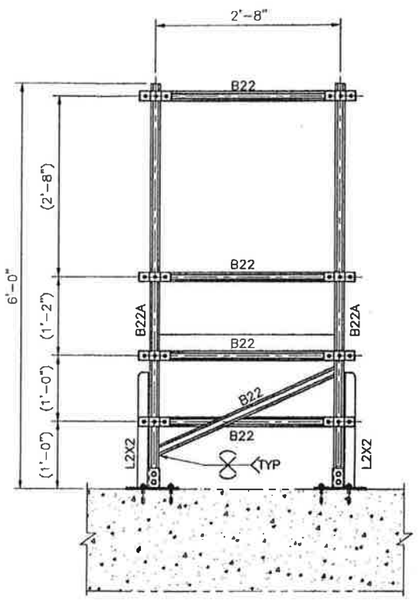
1. IF THIS SHEET IS NOT 36 X 24 THEN IT IS A REDUCED SIZE PLOT. USE GRAPHIC SCALE ACCORDINGLY.
2. B22, B22A AND FITTINGS ARE AS MANUFACTURED BY B-LINE.
3. PAINT L2X2 DIAGONAL BRACING 2 COATS YELLOW.



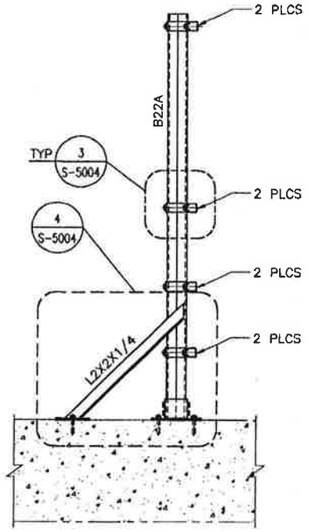
FRONT



SIDE



FRONT



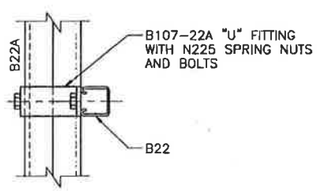
SIDE

1 E-3000 DETAIL

1' 9" 6" 3" 0 1'
1"=1'-0"

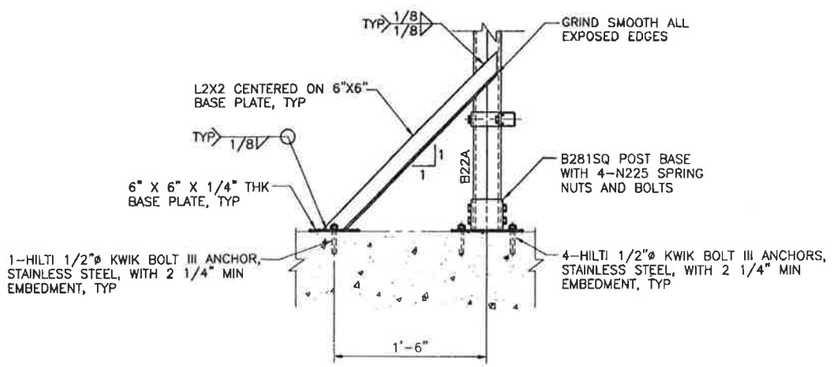
2 E-3000 DETAIL

1' 9" 6" 3" 0 1'
1"=1'-0"



3 S-5004 DETAIL

0 1" 2" 4" 6" 8"
3"=1'-0"



4 S-5004 DETAIL

0 1" 2" 4" 6" 8"
3"=1'-0"

WARNING

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NO.	DATE	CLASS REV	DESCRIPTION	DWN	VER	CHKD	SUB	APP
1	6/10/05	U	RECORD DOCUMENTS.	HFG	HFG	TAL	KRC	JJ

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TA-55 SST PAD

SERVICE PANEL RACK DETAILS

BLDG 355 TA-55

DRAWN	H.GONZALES
DESIGN	A.NEILL
CHECKED	D. ORLOWSKY
DATE	3/21/05

SUBMITTED K. CARR

APPROVED FOR RELEASE J. JOHNSON

Los Alamos NATIONAL LABORATORY
PO Box 1663
Los Alamos, New Mexico 87545

SHEET S-5004
21 OF 34

CLASSIFICATION U | REVIEWER J. CLARK | DATE 3/21/05

PROJECT ID 101226 | DRAWING NO. C53787 | REV 1

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