

## Permit Modification Request

### Introduction

The following submittal has been prepared by the Department of Energy and Los Alamos National Security, LLC (DOE/LANS) to request eleven (11) permit modifications to the November 2010 Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (Permit). These modifications have been prepared as self-implementing Class 1 permit modifications and Class 1 permit modifications requiring prior approval as described in the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (20.4.1.900 NMAC) (incorporating Code of Federal Regulations [CFR], Title 40 § 270.42(a) and (d)). LANL's Environmental Protection Agency (EPA) identification number is EPA ID No. NM0890010515.

The permit modifications include changes to the emergency equipment listings and instructions for inspections, revisions to figures and descriptions of structures and equipment at Technical Areas (TA) 50 and 54, and correction and clarification of statements within the existing Permit to reflect various changes occurring in support of waste management activities. These modifications do not include requests to remove any emergency equipment without replacement, changes to the capacity of the storage units, or changes to the EPA hazardous waste numbers stored in the permitted units. This submittal includes suggested revisions to the Permit text and revised figures to be included in the Permit by the New Mexico Environment Department - Hazardous Waste Bureau (HWB) if the modifications are approved. The following table provides a summary of the proposed modifications. After the table is a detailed description of each of the permit modifications and the changes requested to the Permit.

### Permit Modification Summary

Description of Permit Modification	Permit Sections Affected	Proposed Permit Modification Class
Changes/Updates to the emergency equipment listings for the units at Technical Area (TA) 50, Building 69; TA-54, Area L; TA-54, Area G; and TA-54, West	Attachments A and D	1
Removal of the Mobile Visual Examination and Repackaging (MOVER) and support trailer from TA-54, Area G, Pad 1	Attachments A, G.6, J, and N	1
Removal of the High Energy Real-Time Radiography (HERTR) unit from TA-54, Area G, Pad 11	Attachments A, G.12, J, and N	1
Change to the description of the lining of the secondary containment within the sheds at TA-54, Area L	Attachment A	1
Changes to the instructions for the inspection record form	Attachment E	1
Revision of the figures for the TA-50-69 Outdoor Container Storage Unit	Attachments G.5 and N	1

Description of Permit Modification	Permit Sections Affected	Proposed Permit Modification Class
Correction of typographical error for a structure on TA-54, Area G, Pad 10	Attachments A and G.11	1
Removal of the Real-Time Radiography (RTR) system 1 from TA-54, Area G, Pad 9	Attachments G.10, J, and N	1 <sup>1</sup>
Addition of the RTR1 to TA-54, Area G, Pad 11	Attachments A, G.12, J, and N	1 <sup>1</sup>
Addition of a structure within Dome 375 at TA-54, Area G, Pad 11	Attachments A, G.12, J, and N	1 <sup>1</sup>
Changes to the requirement for loading/unloading at TA-50-69 Outdoor Unit	Part 3	1 <sup>1</sup>

<sup>1</sup> Class 1 modifications requiring prior Agency approval (see 40 CFR § 270.42(d)(2)(i)).

## **Permit Modifications**

### **Changes to emergency equipment**

A permit modification to the 1989 LANL hazardous waste facility permit was approved in April 2010. This modification allowed for an update to the equipment available for communications at the hazardous waste management units located at TA-50-69. The changes illustrated in Attachment A (*TA – Unit Descriptions*) and Attachment D (*Contingency Plan*) fully incorporate the changes made to the equipment by that modification and create consistency among the communications equipment available at the permitted units at TA-50-69; TA-54, Area L; TA-54, Area G; and TA-54, West. Additionally, clarification and more detailed information have been added to the TA-54, Building 38 sprinkler system within Attachments A and D. Changes made in Sections A.3; A.4.5; and Table D-1, TA-50; Table D-1, TA-54 Area L; Table D-2, TA-54 Area G; and Table D-3, TA-54 West, include the use of pagers, cellular telephones, and two-way radios as part of the regular communications equipment available for use at these permitted units. Other changes made to Section A.4.5 and Table D-3, TA-54 West; include the addition of information about the sprinkler system within TA-54, Building 38. Additional changes in Section A.4.5 include the removal of structures that are no longer located at the Facility and have been approved by previous permit modifications or notifications. These revisions include administrative and informational changes only and change equipment descriptions without removing any equipment or changing any emergency procedures. Therefore, this permit modification is being implemented as a Class 1 modification pursuant to 40 CFR § 270.42(a).

### **Removal of structures from TA-54, Area G, Pad 1**

The Mobile Visual Examination and Repackaging (MOVER) trailer and support trailer was approved to be installed on Pad 1 in March 2010. The trailer was meant to be used to support transuranic waste characterization procedures, but was never installed. The purpose of this permit modification is to remove the MOVER trailer and support trailer from the Figures 8, 27, 29, and G.6-1 as well as the applicable language in Attachment G.6 (*TA-54, Area G, Pad 1, Outdoor Container Storage Unit Closure Plan*), Sections 2.0,

5.3.1, 5.3.2, and 6.1; and Attachment A (*TA- Unit Descriptions*), Section A.4.2.2. Additionally, changes have been made to Table J-1 within Attachment J (*Hazardous Waste Management Units*) to remove the MOVER and support trailer. The revisions described and illustrated in the redline-strikeout text, make administrative and informational changes to reflect that a planned structure was never installed on TA-54, Area G, Pad 1. This modification is being implemented as a Class 1 permit modification pursuant to 40 CFR § 270.42(a).

#### Removal of structures from TA-54, Area G, Pad 11

As with the MOVER trailer and support trailer on Pad 1, the High Energy Real-Time Radiography (HERTR) unit was approved to be installed on Pad 11 in March 2010. The HERTR was meant to be used to support transuranic waste characterization procedures, but was never installed on Pad 11. This purpose of this permit modification is to remove the HERTR unit from Figures 8, 27, and 36 in Attachment N (*Figures*); and Figure G.12-1 in Attachment G.12 (*TA-54, Area G, Pad 11 Outdoor Container Storage Unit Closure Plan*) and the applicable language in Attachment G.12, Sections 2.0 & 5.3.2; and Attachment A (*TA – Unit Descriptions*), Section A.4.2.9. Additionally, changes have been made to Table J-1 within Attachment J (*Hazardous Waste Management Units*) to remove the HERTR unit. The revisions described and illustrated in the redline-strikeout text, make administrative and informational changes to reflect that a planned structure was never installed on TA-54, Area G, Pad 11. Therefore, this modification is being implemented as a Class 1 permit modification pursuant to 40 CFR § 270.42(a).

#### Modification to the description of secondary containment at TA-54, Area L

The purpose of this permit modification is to change the description of the secondary containment for storage sheds 68, 69, and 70 at TA-54, Area L. Attachment A (*TA – Unit Descriptions*), Section A.4.1.3 currently states that the interior of each shed and sump is coated with chemically-resistant epoxy paint, while there are actually liners within each of the sheds. The revision described and illustrated in the redline-strikeout text attached, make administrative and informational changes to reflect that the storage sheds at TA-54, Area L have polyethylene liners instead of epoxy paint. The language in Section A.4.1.3 has been modified to reflect this and is being implemented as a Class 1 permit modification pursuant to 40 CFR § 270.42(a).

#### Modification to revise the inspection record form

Revisions to the Inspection Record Form and instructions within Attachment E (*Inspection Plan*), in accordance with Section E.1 of the plan, may be changed through a Class 1 permit modification pursuant to 40 CFR § 270.42(a). Changes illustrated in redline-strikeout to the Inspection Record Form instructions to clarify inspection of certain items and convey the variability for the methods of inspection that exist for some of the permitted units. Additional language has been added to emphasize the requirements of Section 2.6 (*General Inspection Requirements*) within the permit.

#### Modification to figures for TA-50-69 Outdoor Storage Unit

The figures currently within the Permit incorrectly identify one of the transportainers at the TA-50-69 Outdoor Unit as structure number 154. Figure 23 within Attachment N (*Figures*) and Figure G.5-1 within Attachment G.5 (*TA-50-69 Outdoor Container Storage Unit Closure Plan*) have been revised to correctly identify this structure as 194. The purpose of this permit modification makes an informational changes and is being implemented as a Class 1 permit modification pursuant to 40 CFR § 270.42(a).

#### Modification to correct a typographical error for a structure on TA-54, Pad 10

Figures and other text within the Permit correctly identify the Super High Efficiency Neutron Coincidence (SuperHENC) counter located on TA-54, Area G, Pad 10 as structure TA 54-0547. However, text within Attachment A (*TA – Unit Descriptions*), Section A.4.2.4; and Attachment G.11 (*TA-54, Area G, Pad 10 Outdoor Container Storage Unit Closure Plan*), Section 2.0 has been revised in redline-strikeout to accurately identify the structure number. The revisions described and illustrated in the redline-strikeout text, correct a typographical error associated with the permitted unit at TA-54, Area G, Pad 10. This modification is being implemented as a Class 1 permit modification pursuant to 40 CFR § 270.42(a).

#### Modification to remove a structure from TA-54, Area G, Pad 9

The Real-Time Radiography (RTR) system 1 is currently at TA-54, Area G, Pad 9 and is identified as transportainer 362 in Attachment G.10 (*TA-54, Area G, Pad 9 Outdoor Container Storage Unit Closure Plan*), Attachment J (*Hazardous Waste Management Units*), and Attachment N (*Figures*). The unit has been used in support of the transuranic waste characterization activities at TA-54. Plans to remove this unit from Pad 9 and relocate it to Pad 11 are underway. However, the trailer must be moved temporarily prior to being removed from TA-54, Area G, Pad 9. The RTR1 will move approximately 20 feet to the south and be used for waste characterization before it is removed from the pad entirely. Because the ultimate destination for the RTR1 is not on Pad 9, Sections 2.0, 2.1, 5.2.2, & 5.3.2 and Table G.10-6 within Attachment G.10 have been revised to remove structure 362 (transportainer) from the permitted units. Also, Section 6.1 and Figure G.10-1 within Attachment G.10 have been revised to remove the structure, but two sampling points will remain for the purpose of closure. There will be a sampling location representing loading operations for the original location of the RTR1 and one to indicate the second location of the RTR1. Table J-1 within Attachment J has been revised to remove “Transportainer 362” from the TA-54 Area G Pad 9 description. Figures 8, 27, and 28 in Attachment N have been revised to remove structure 362 because it is the final state of the trailer. The purpose of this permit modification is to make changes to structures. Therefore, a Class 1 modification requiring prior Agency approval pursuant to

40 CFR § 270.42(d)(2)(i)) is being requested. This is consistent with the requirements in Section 3.1(3) of the Permit for changes to structures that have managed hazardous waste at a permitted unit.

Modification to add a structure to TA-54, Area G, Pad 11

The RTR1 is used for X-ray examination of the contents of a waste drum and is currently located as structure 362 on TA-54 Area G, Pad 9. In support of current planning activities for the mixed transuranic waste characterization procedures the RTR1 will be moved from TA-54, Area G, Pad 9 to the permitted unit at TA-54, Area G, Pad 11. The move from Pad 9 to Pad 11 is anticipated to be completed by June 2011. Depictions and descriptions of the RTR1 and its capability, where applicable, have been added to the Permit in redline-strikeout or as revised figures. Descriptions have been added to Section A.4.2.9 in Attachment A (*TA – Unit Descriptions*); Sections 2.0, 5.2.2, & 5.3.2 in Attachment G.12 (*TA-54, Area G, Pad 11 Outdoor Container Storage Unit Closure Plan*); and Table J-1 in Attachment J (*Hazardous Waste Management Units*). Figure G.12.1 in Attachment G.12 and Figures 8, 27, & 36 within Attachment N (*Figures*) have been revised to illustrate the RTR1 on eastern side of the permitted unit. This request is consistent with the requirements in Section 3.1(3) of the Permit for changes to structures that will manage hazardous waste at a permitted unit. Therefore, a Class 1 modification requiring prior Agency approval pursuant to 40 CFR § 270.42(d)(2)(i)) is being requested.

Modification to add a structure within Dome 375 at TA-54, Area G, Pad 11

Within Dome 375 located on TA-54, Area G, Pad 11, construction and installation of a hard-sided temporary structure to be used for size reduction and repackaging is anticipated to be completed by August 2011. The structure will be capable of handling a wide variety of waste storage crates and boxes containing transuranic waste. The structure will be used for size reduction, decontamination, segregation, waste assay, reclassification activities, and repackaging of transuranic waste into standard waste boxes (SWB's) suitable for meeting the waste acceptance criteria and transportation requirements for disposal offsite. These activities will be consistent with the storage activities occurring at other permitted units within TA-50-69 and at TA-54-231, but will be designed to handle large containers. No treatment activities will occur within the structure within Dome 375. Section A.4.2.9 in Attachment A (*TA - Unit Descriptions*), Sections 2.0, 5.2.2, & 5.3.1 of Attachment G.12 (*TA-54, Area G, Pad 11 Outdoor Container Storage Unit Closure Plan*), and Table J-1 in Attachment J (*Hazardous Waste Management Units*) have been revised to incorporate a description of the modular containment structure. Figure G.12-1 in Attachment G and Figure 36 in Attachment N (*Figures*) have been revised to depict the box process area within Dome 375. This modification is consistent with the requirements in Section 3.1(3) of the Permit for changes to structures that will manage hazardous waste at a permitted unit. Therefore, a

Class 1 modification requiring prior Agency approval pursuant to 40 CFR § 270.42(d)(2)(i)) is being requested.

Modification to change unloading/loading requirements at TA-50-69 Outdoor Unit

Section 3.11.2 of the Permit currently prohibits unloading and loading activities during precipitation events at TA-50-69. The purpose of this permit modification is to change the language from “precipitation events” to “severe weather conditions”. This is consistent with operations at other permitted units and procedures implemented at LANL state: “Normal waste handling operations inside TA-50-69 are not usually affected by severe weather. During severe weather events, waste containers will not be transported to/from the transportainers or TA-50-69.” Severe weather examples include heavy snow, icy conditions, flooding, lightning, or high winds (> 25 mph). This descriptor more accurately defines the conditions that loading and unloading operations should not occur. The suggested language change is included in redline-strikeout in Section 3.11.2 of the Permit. The purpose of this modification is to provide clarification of a requirement within the Permit and does not substantially alter the Permit condition or reduce the capacity of the facility to protect human health and the environment. Therefore, a Class 1 modification requiring prior approval pursuant to 40 CFR § 270.42(d)(2)(i)) is being requested.

The eleven permit modifications described above are Class 1 permit modifications and Class 1 modifications requiring prior approval as described in 40 CFR § 270.42(a) and (d). The basis for specific permit modification request classes has been included in each of the permit modification discussions. Attached to this permit modification request, are versions of the revised portions of the Permit in redline-strikeout and the revised figures as described in this submittal. The revisions make editorial changes to the language in sections of the Permit that reference the revised structures, including deletions and additions to figures and descriptive text. These changes are necessary to clarify the implementation of requirements within the Permit and to facilitate the transuranic waste characterization activities at TA-50 and TA-54.

**Proposed Redline-Strikeout Revisions to the Los Alamos National Laboratory  
Hazardous Waste Facility Permit, November 2010**





### **3.10 TA-3 CONTAINER STORAGE REQUIREMENTS**

#### **3.10.1 General Operating Conditions**

The Permittees shall ensure that storage of hazardous or mixed waste in containers at TA-3-29 occurs only in the CSU in Rooms 9010, and portions of Rooms 9020, and 9030 identified in Attachment A (*Technical Area Unit Descriptions*) and Attachment J (*Hazardous Waste Management Units*), Table J-1 (*Active Portion of the Facility*).

#### **3.10.2 Secondary Containment**

The Permittees shall paint the floors in Rooms 9010, 9020, and 9030 within the TA-3-29 permitted unit with an epoxy sealant. The sealant must be maintained in accordance with Permit Section 3.7.1 of this Part and the manufacturer's specifications.

### **3.11 TA-50 CONTAINER STORAGE REQUIREMENTS**

#### **3.11.1 General Operating Conditions**

- (1) The Permittees shall ensure that storage of hazardous or mixed waste in containers at TA-50 occurs only in two areas: 1) an indoor storage area located in Building 69 (TA-50-69), Rooms 102 and 103; and 2) an outdoor storage area (TA-50-69, Outdoor) located south/southeast of Building 69, comprised of an asphalt pad and modular transportainer units, as identified in Attachment A (*Technical Area Unit Descriptions*) and Attachment J (*Hazardous Waste Management Units*).
- (2) The Permittees shall ensure that ignitable wastes will not be stored inside the glovebox located within the indoor permitted unit.
- (3) The Permittees shall at all times maintain a fire access lane between the TA-50-69 Outdoor and Indoor permitted units (*see* 40 CFR § 270.32(b)(2)).

#### **3.11.2 Preventing Hazards in Loading/Unloading**

The Permittees shall not load or unload waste at TA-50 during ~~precipitation events~~ severe weather conditions.

#### **3.11.3 Preventing Run-on**

The Permittees shall prevent surface water run-on from contacting stored waste containers at the TA-50 permitted units.

The Permittees shall annually inspect and when necessary maintain the drainage swales located south of the permitted unit between the permitted unit and Material Disposal Area (MDA) C, and located on the west side of the permitted unit between Pecos Drive and the



**ATTACHMENT A**  
**TECHNICAL AREA (TA) - UNIT DESCRIPTIONS**



walls are similarly constructed. The epoxy-painted floor of the building is a reinforced concrete slab on compacted fill.

A forklift will be used to move containers stored at the permitted units at TA-50-69. Fiberglass-reinforced plywood boxes and palletized drums will be handled with a forklift equipped with tines. Individual drums of waste will be manipulated with a drum-grapple attachment on the forklift. Small containers may be handled manually or with a dolly. Inside TA-50-69 two cranes are available to move heavy objects.

TA-50 is patrolled by security personnel during non-operational hours to ensure that unauthorized entry has not occurred. The locations of the security fences and entry gates at TA-50 are shown on Figure 6 in Permit Attachment N (*Figures*).

TA-50-69 access is controlled through a centralized Operations Center located in TA-50-84. The Indoor permitted unit is always locked and access is gained by a badge reader. Doors to the building and transportainers are locked. Keys to these doors are distributed to designated personnel only. A chain is installed at the east end of the operations area and adjacent to TA-50-84 and is posted with the bilingual hazardous waste sign.

All personnel involved in waste management activities at the TA-50-69 indoor and outdoor permitted units have immediate access to an internal alarm or emergency communication device. In the event of an emergency, this communication equipment allows personnel to contact the operating group management, the Emergency Management and Response personnel, or the Central Alarm Station operator.

TA-50-69 is equipped with an audible alarm system to alert personnel to evacuate the area. The alarm system may be activated by one of the fire alarm pull stations located throughout the building. ~~TA-50-69 also has a public address system for announcing fires or evacuations and telephones with paging capabilities. Paging telephones are used to page on-site personnel and may be used in the event of an emergency to communicate the location and nature of hazardous conditions to personnel in the area. The alarm system is interrupted when the paging telephone system is activated to allow personnel to hear the announcement.~~ Personnel can also use ~~these~~ phones to summon assistance from local emergency response teams in case of an emergency. Personnel may carry pagers, two-way radios, or cellular telephones so they can contact, or be contacted by, on-site and the Facility emergency support personnel at all times.

TA-50-69 is equipped with fire extinguishers and fire suppression systems. Depending on the size of a fire and the fuel source, fire extinguishers may be used by on-site personnel. However, the Facility policy encourages immediate evacuation of the area and notification of appropriate emergency personnel. The fire alarm control panel continuously monitors all fire suppression and detection systems and transmits signals to the Los Alamos County Fire Department through the Facility's central alarm system.

A fire hydrant installed according to National Fire Protection Association standards is located approximately 55 feet west of TA-50-69. Water is supplied to the fire hydrant by a municipal water system through eight inch pipes at an adequate volume and pressure (*i.e.*, 200 gallons

metal secondary containment pallets are coated with chemically-resistant urethane. The stressed- or tensioned-membrane fabric used on Storage Dome 215 at the aboveground permitted unit within the fence at Area L is coated with ultraviolet (UV)-stabilized plasticized polyvinyl chloride (PVC). It is fungus-resistant and certified flame-retardant (*i.e.*, self-extinguishing).

#### **A.4.1.1 Storage Dome 215**

Storage Dome 215 is 60 feet wide, approximately 266 feet long, and 26 feet high (*see* Figure 25 in Attachment N (*Figures*)). It is an arch frame-supported stressed-membrane structure. The dome is of modular construction and uses light construction materials (*i.e.*, aluminum framework with membrane or fabric covering). It is equipped with 14 personnel doors and two roll-up doors. The dome's pad is equipped with a 6-inch-high, 8-inch-wide concrete ring wall that surrounds the perimeter of the dome, and the dome is anchored to the concrete ring wall with anchor bolts. A ramp is located at the vehicle entrance to the dome and allows vehicles and container handling equipment to pass safely over the ring wall. The ring wall and the ramp prevent run-on into the dome. Any liquid that might accumulate within the storage dome (*e.g.*, liquids resulting from fire-suppression activities) is contained within the ring-walled area. Liquid that may result from fire-suppression activities and that is in excess of the capacity inside the ring wall is collected in a double-walled holding tank connected to dome 215 by a double-walled pipe.

#### **A.4.1.2 Reserved**

#### **A.4.1.3 Storage Sheds 68, 69, and 70**

Storage sheds 68, 69, and 70 are prefabricated sheds constructed of steel (Safety Storage Building, Model 22) (*see* Figure 26 in Attachment N (*Figures*)). Each shed measures approximately 23 feet long, 9 feet wide and 8.5 feet high. Access to these storage sheds is obtained through one of three sets of double doors. Storage Shed 68 has three separate compartments with one door leading to each compartment. Storage Sheds 69 and 70 each have two separate compartments with one door leading to the smaller compartment and two doors leading to the larger compartment. The sheds are elevated by design which prevents run-on. Each shed is constructed with liquid-tight sumps to ensure containment of any potential leaks or spills and to prevent runoff. The floor of each shed consists of a metal grate that covers the sump areas. Containers are placed directly on the metal grates which prevent contact with liquids that may have accumulated in the sumps. The ~~interior sump~~ of each shed ~~and sump~~ is ~~coated with chemically-resistant epoxy paint~~ lined with high-density polyethylene liners. The designed sump storage capacity of each shed is 750 gallons, which exceeds the amount necessary to hold 10% of the total storage capacity of each shed (1,760 gallons).

Shed 68 has three separate compartments each having its own sump with individual capacities of 250 gallons. Sheds 69 and 70 have two separate compartments, each having its own sump. One compartment consists of two thirds of the surface area (and capacity) of Sheds 69 and 70. The capacity of this compartment's sump is 500 gallons; the smaller compartment's sump

system in Dome 229 at the south end of Pad 9. The system is not intended for, nor was it designed to provide, secondary containment of liquid waste releases. It was designed to provide an augmented fire water collection capability to prevent fire water running off the pad if any fire suppression activities exceeded the capacity contained in the upstream domes. Domes 231 and 232 have three drain inlets apiece in the southeast portion of the domes. The drains in each dome are connected and drain to a collection pipe line that runs down the east side of Pad 9. The line terminates in the collection sump in the east end of Dome 229. The floor of Dome 230 is designed for secondary containment of liquids. The asphalt pad floor is sloped (1%) towards a concrete sump at the east end of the dome. The asphalt floor and curbs in Dome 230 are lined with a double layer of 40 mil high-density polyethylene (HDPE), and the sump is lined with a single layer of 40 mil HDPE, creating an impervious layer to contain any liquids that might accumulate. The secondary containment capacity for Dome 230, which includes the sump and curbed area, is approximately 48,255 gallons which exceeds the amount necessary to hold 10% of the total storage capacity of the dome (330,000 gallons). The TWISP domes on Pad 9 are unheated; the storage of waste within the transportainer is for the purpose of temperature equilibration of the waste for characterization procedures (*i.e.*, real-time radiography and headspace gas sampling associated with the transuranic waste characterization program).

#### **A.4.2.2 Pad 1**

The 4 to 6 inch thick asphalt pad is approximately 358 feet long and 213 feet wide. TA-54-412 ~~and the Mobile Visual Examination and Repackaging (MOVER) with support trailer are~~ is located on the pad in the northeastern portion of Area G (*see* Figure 29 in Attachment N (*Figures*)).

TA-54-412 (*see* Figure 29 in Attachment N (*Figures*)) is a one story building that is approximately 220 feet long by 60 feet wide (13,200 ft<sup>2</sup>). It consists of two structures, an internal primary confinement structure that houses the DVRS processing operations and an external secondary confinement structure which surrounds the primary confinement structure. The external secondary confinement structure (hereinafter referred to as “building”) provides protection from the elements and a temperature-controlled space for the internal structures and associated process equipment. A 16 ft by 16 ft roll-up vehicle-access door is located on the north end of the building. The roll-up vehicle access door opens to the secondary confinement structure area and serves as a pass-through for moving DVRS feed-stock waste into the primary confinement structure. There is also vehicle access on the south end of the building for removal of compacted waste from DVRS operations. The concrete slab provides a structural foundation for the building and the shearer and baler system and provides a direct working surface for movement of fiberglass reinforced plywood boxes and processing equipment. The concrete slab is above grade to direct potential run-on away from the building. The floor in the building is sloped to a sump that has a grating cover to provide traction and a level working surface. The sump is treated with chemical-resistant epoxy filler-sealer and protective coating.

The primary confinement structure is housed entirely within the building and consists of five interconnected enclosures or cells. The system is approximately 150 feet long by 50 feet wide

by 16 feet high and sits directly on the sealed concrete floor. The primary confinement structure is constructed of 6-inch-thick, two-hour fire-rated sandwich panels made of 16-gauge steel and gypsum wallboard measuring 40 feet wide by 4 or 8 feet long. The structure interlocks in a self-supporting steel framework that can be assembled into multiple configurations. The primary confinement structure has five cells each of which is used for a specific function of the DVRS process. The cells are equipped with both personnel and large roll-up doors so that personnel, equipment, and material can access the structure and move from one cell to the next. A cell is used to sort and segregate transuranic and mixed transuranic waste and contains various tools used to dismantle the fiberglass reinforced plywood boxes. Other cells are used for decontamination and packaging and a final cell contains the shearer and baler used to compact waste items. The shearing and baling process takes place within a tightly sealed compartment. Waste containers that need to be dismantled are processed using circular saws, reciprocating saws, hammers, pry bars, and other tools, as needed. Waste containers are moved with trucks, forklifts, air pallets, and hand dollies. The primary and secondary confinement structures are built to meet criteria specified in DOE-STD-1020-92, "*Natural Phenomena Hazards Design and Evaluation Criteria for DOE Facilities*" (DOE, 1992) for Performance Criteria 2 structures. Performance Criteria 2 structures include active fire suppression, emergency communications, and confinement systems that provide important safety functions related to emergency handling or hazard recovery and are designed to protect the health and safety of workers and visitors during active operations. The building contains fire protection piping and heating, ventilation, and air conditioning ducting and is a two-hour code-compliant fire-rated building. Panels in the primary confinement structure are the same material as the two-hour fire-rated wall construction with additional supports. A dry-pipe fire-protection system provides coverage for the primary confinement structure. A water collection area in the south end of the building provides for containment of any potential leaks, spills, or accumulated water resulting from the activation of the fire protection system.

~~Located on the northeast portion of Pad 1 (form location of Dome 226) is the MOVER and support trailer. The MOVER is a 10 by 40-ft transportainer unit that contains a glovebox utilized to visually examine and repackage the contents of high activity TRU waste drums. The MOVER unit is a certified DOT 7A Type Container (CPC 1998). The MOVER structure is classified as a Type II (000) structure per NFPA 220, *Standard on Types of Building Construction*. Interior walls are double-walled for containment purposes with sealed and polished stainless steel interior for ease of decontamination. The outside walls of the MOVER are constructed of carbon steel. The walls are insulated with cellulose, which is manufactured under Consumer Product Safety Commission performance criteria mandating fire standards. The interior and exterior of the MOVER are non-flammable metal with steel stud construction. All electrical systems are designed to the National Electrical Code.~~

~~The MOVER is comprised of three rooms consisting of a control room, glovebox operations room, and the drum entry room. The control room provides space for personnel entry, a portal radiation monitor, and system controls. There are doors between each section to isolate each room. Doors are kept closed during the glovebox operations to maintain negative pressure in the unit. Airflow direction is maintained so that air flows from areas of low contamination to areas of potentially higher contamination before being exhausted through the HEPA~~



~~ventilation system. The unit has continuous air and fixed head monitors, intercom system, fire protection system, HVAC, and lighting.~~

~~The glove box operation room contains the glovebox, drum lifter, HEPA filters and differential pressure monitor panel. The drum entry room is located at one end of the trailer. This room provides space for four standard 55-gallon drums on transport dollies. TRU waste drums are bagged into the glovebox and opened. The contents are examined and then bagged out into another drum(s). Nonconformance items are identified and bagged out into a third drum. The empty parent drum and newly filled drum(s) are then removed from the MOVER unit.~~

~~The glovebox is 12-ft long, 2.75-ft high and the end is 2.3-ft wide at the top. The glovebox is fabricated from Type 304L stainless steel and includes a HEPA ventilations system.~~

~~The MOVER support trailer is 9 by 20-ft metal trailer that houses ventilation blowers with a monitored discharge system, the fire suppression system and electrical distribution system for the MOVER.~~

#### **A.4.2.3 Pad 3**

The 4 inch thick asphalt pad 3 is approximately 339 feet long and 50 feet wide. Storage Dome 48, located at the eastern end of pad 3, is 285 feet long and 50 feet wide and has a peak height of 24 feet (*see* Figure 30 in Attachment N (*Figures*)). The design and materials of construction for dome 48 are the same as the other domes at TA-54. The dome is equipped with a double-panel rolling door at the south end of the dome and eight personnel doors located approximately every 80 feet along the dome's length mainly to allow for adequate access both by vehicles and personnel. The interior perimeter of the dome is surrounded by a 6-inch-high, 8-inch-wide asphalt curb which helps prevent run-on into, and runoff from, the dome. An asphalt ramp located at the vehicle entrance allows vehicles and container handling equipment to pass safely over the curb. The dome is anchored to Pad 3 with standard drift pins.

#### **A.4.2.4 Pad 10 (former Pads 2 and 4)**

Pad 10 is constructed at the location of former Pads 2 and 4. The asphalt pad measures approximately 350 feet long by 250 feet wide and is constructed of asphalt (*see* Figure 31 in Attachment N (*Figures*)). The transuranic waste characterization facilities and container storage area are located on this pad. The transuranic waste characterization facilities consist of mobile and modular units equipped with instruments and equipment for waste characterization and repackaging. The transuranic waste characterization facilities include the following: drum-loading or receiving unit(s); equilibration units(s); gas mobile characterization unit(s); mobile repack units; and nondestructive radioassay unit(s). External containment is provided by the trailers and transportainers because waste characterization activities take place inside the structures. The characterization provided by the non-destructive assay radioactivity monitoring techniques described does not involve opening the waste containers. Activities at Pad 10 include the following:

### **TA 54-0498, LANL HENC**

The Canberra Facility High Efficiency Neutron Counter (HENC) is designed to provide a passive neutron and gamma measurement of transuranic waste drums in 55-gal containers. The trailer housing the HENC is Structure #498. The HENC supported the Facility's TWCP and Project 2010 and subsequently CCP operations beginning in 2004 to the present.

### **TA 54-0365, Office Building, Formerly MTGS**

TA 54-0365 formerly housed the Mobile Tomographic Gamma System (MTGS). The MTGS was a gamma assay system prototype developed by the Permittees. The instrument was salvaged in 2007 and the trailer in which it was housed (Structure #365) was converted to office space.

### **TA 54-~~0457~~0547, Super High Efficiency Neutron Coincidence (SuperHENC) counter**

Trailer TA-~~0457~~0547 houses a high efficiency neutron counter designed to handle large waste containers. It is designed to provide a passive neutron and gamma measurement of large transuranic waste containers like standard waste boxes. The SuperHENC will support the Facility's TWCP and the CCP operations beginning in 2010.

### **TA 54-0483, Source Storage**

Trailer TA54-0483 serves as a storage repository for calibration sources needed by the NDA systems.

### **TA 54-0497, RTR2**

The Real-Time Radiography (RTR) system #2 is designed to provide X-ray examination of the contents of a waste drum. The unit, RTR2, has been located on Pad 10 in support of the Department of Energy Carlsbad Central Characterization Project (CCP) operations.

### **TA 54-0506, MCS HENC**

The Canberra MCS High Efficiency Neutron Counter (HENC) is functionally identical to the Permittees' HENC and provides passive neutron and gamma assays of 55-gal waste drums.

### **TA 54-1059, Storage**

TA54-1059 has been used to store miscellaneous NDA equipment, such as turn-tables, equipment stands, etc.

### **TA 54-0545, Storage**

foundation is constructed of concrete. Two overhead doors and one personnel door on the south side of the shed allow both vehicles and personnel to access the shed.

#### **A.4.2.8 TA-54-33**

TA-54-33 is located in the north-central portion of Area G and consists of a dome attached to a concrete-block building (*see* Figure 34 in Attachment N (*Figures*)). This permitted unit is used for waste storage and potential or future waste characterization activities. The dome and building are located on a concrete foundation surrounded by an asphalt pad. The concrete foundation is 8 inches thick and overlies 6 inches of base course. The concrete-block building attached to the dome is approximately 40 ft long and 34 ft wide. The dome is 157 ft long and 50 ft wide with a peak height of 24 ft. A double-panel rolling door is located at the west end of the dome for vehicle access. A single-panel rolling door is located at the southeast end of the dome for container-handling access. Two personnel doors are located approximately 40 ft apart along the north wall of the dome. Two additional personnel doors are located in the concrete-block building; one on the west side, and one on the east side. In addition, two overhead doors are located on the north side of the building to allow free movement of personnel and container-handling equipment between the building and the dome.

The design and materials of construction for the TA-54-33 dome are the same as the other domes at TA-54. The dome's aluminum frame is directly connected to the building which extends approximately 5 ft into the dome. Inside the dome the concrete foundation is sloped to a 6-inch-wide centralized concrete drainage trench that is covered with 12-inch-wide steel grating. The trench slopes toward a steel sump located at the east end of the dome. Two additional trenches, located in Rooms 100A and 100B, are perpendicular to and feed into the main trench. A floor drain in Room 105 connects with the trench in Room 100A.

The steel sump is located within a concrete basin that has 8-inch-thick walls, a 9-inch-thick base and measures approximately 15 ft long by 7 ft wide by 6 ft deep. The sump is approximately 14 ft long by 6.5 ft wide by 5 ft deep and has a capacity of 3,473 gallons. A primary holding tank associated with the sump is located in a concrete basin that is 15 ft long by 12 ft wide by 5.5 ft deep and has a capacity of approximately 7,405 gallons. A secondary holding tank associated with the sump is located in a separate concrete basin that is 12 ft long by 12 ft wide by 5.5 ft deep and has a capacity of approximately 5,924 gallons. These basins have the capacity to contain any spills or leaks resulting from a potential overflow or breach of the holding tanks.

#### **A.4.2.9 Pad 11**

This asphalt pad is approximately 4 inches thick, measures approximately 478 ft long by 137 ft wide, and is sloped approximately 1 to 2% to the southeast. Storage dome 375 is located on the western portion of pad 11 and is used for storage of hazardous, mixed low level, and mixed transuranic waste. It measures approximately 300 ft long by 100 ft wide (*see* Figure 36 in Attachment N (*Figures*)). The building is an aluminum A-frame truss design that is anchored to a concrete ring wall. The dome is of modular construction utilizing a membrane or fabric covering. It is equipped with 14 personnel doors and two roll-up doors, one each at

the east and west ends of the building. Ramped entrances allow for safe movement of container handling equipment and vehicle access. Dome 375 contains a modular panel containment structure (approximately 120 feet long x 60 feet wide) used for size reduction, decontamination, segregation, waste assay, reclassification activities, and repackaging of transuranic waste prior to shipment offsite. The Real-Time Radiography (RTR) system #1 is designed to provide X-ray examination of the contents of a waste drum. The unit, RTR1, has been located on Pad 11 in support of the transuranic waste characterization operations. The High Energy Real-Time Radiography (HERTR) Unit is located on the eastern portion of Pad 11. The Unit is placed on a concrete pad with an approximate footprint of 50 by 50 ft. It consists of two structures, a portable control room and a re-locatable X-ray vault constructed of modular concrete walls and blocks for shielding. Waste containers are placed inside the vault on a turntable mounted to a mechanical cart. Once the waste is loaded on to the cart, the RTR operator, from within the control room, will electronically move the cart into the X-ray vault, close the vault door, and perform the RTR. This unit will provide X-ray examination of the contents of waste drums or SWBs. The high energy of the unit will allow more efficient characterization of TRU waste container and minimize the opening and repackaging of waste containers that contain objects that the standard RTR unit could not penetrate.

#### **A.4.3 TA-54 West**

The two permitted units at TA-54 West include the indoor low bay and the high bay at TA-54-38 and the outdoor storage pad which surrounds the north, east, and south sides of TA-54-38 and the loading dock at TA-54-38. The permitted units at TA-54 West are used to store solid mixed low level and mixed transuranic waste (*see* Figure 37 in Attachment N (*Figures*)).

##### **A.4.3.1 TA-54 West Building (RANT)**

TA-54-38 is a building constructed of 36-ft-high pre-cast concrete panel walls topped by prestressed double-T concrete roof sections. Its foundation consists of a 6-inch reinforced concrete slab on compacted fill. The building is divided into several offices and houses the Indoor permitted unit which includes the low bay and the high bay (*see* Figure 37 in Attachment N (*Figures*)). The low bay is approximately 40 ft-wide and 34 ft long. An 8 ft-wide by 12 ft-high roll-up door is located at the east end and opens to an outdoor loading dock. A second 8-ft-wide by 12-ft-high roll-up door is located in the southeast corner and opens into the high bay. The walls and floor of the low bay are coated with industrial grade enamel paint. The high bay, approximately 40 ft wide and 80 ft long, is used for loading transuranic and mixed transuranic waste into Transuranic Package Transporter-II containers. It is equipped with 14-ft-wide by 18-ft-high roll-up doors on the east and west ends to allow convenient, indoor loading of the tractor-trailers that transport shipments of waste to the Waste Isolation Pilot Plant. The high bay floor is not painted and slopes at an angle of 1.5 degrees toward a central trench (which is 5 inches wide, 6 inches deep and 50 ft long) and a sump. The entire length of the trench is covered with a metal grate and is designed to hold precipitation and snow melt from tractor-trailers.

Area" and "Unauthorized Persons Keep Out." The security fence is inspected by on-site personnel and repairs are made as necessary. The locations of the security fence, entry gates, and entry stations are shown on Figures 7, 8, and 9, in Attachment N (*Figures*).

#### **A.4.5 Emergency Equipment**

Emergency equipment is located throughout TA-54 and includes internal communications, alarm systems, fire alarms, spill kits, and decontamination equipment. Area L is equipped with an audible alarm system to alert personnel of a fire or the need to evacuate the area. These alarms can be activated by pulling a fire alarm or by pushing the evacuation alarm button. The fire alarm pull boxes are located in Dome 215 and are connected to the Los Alamos Fire Department (LAFD) through the Facility's central alarm system at all times. Evacuation alarms are located adjacent to the fenceline crash gates and other locations in Area L (see Attachment D, Table D-1). In addition to the alarms there are numerous telephones located in and around the structures within Area L. These telephones ensure that personnel can contact on-site and Facility emergency personnel at all times. Many of these telephones also serve as emergency paging phones so that information can be announced throughout the area. Alphanumeric pagers, cellular telephones, and/or two-way radios are also distributed to workers at Area L. Employees can be notified of an emergency situation and appropriate response actions through the use of a text message sent on the emergency alpha-numeric pagers or cellular telephone, or by two-way radio. The emergency paging system can be utilized to alert workers of an emergency situation as well as appropriate response actions. Windsocks are also located at strategic locations to indicate wind direction and strength. Fire control equipment at Area L includes fire extinguishers (*e.g.*, ABC-rated, water, carbon dioxide, dry chemical), a dry-pipe sprinkler system, and dry chemical systems. The fire extinguishers are available at or near most structures within Area L for use by on-site personnel depending on the size and fuel source of a fire. Dome 215 has an automatic dry-pipe sprinkler system that is heat activated in the event of a fire. Storage sheds 68, 69, and 70 have dry chemical systems. Fire hydrants are located near TA-54-37 and the southeast corner of TA-54-62. Personal decontamination equipment at Area L includes emergency eyewash stations and showers. This equipment is for use by personnel in emergencies involving chemical or radiological materials. These stations are generally located near or inside structures where waste is being handled. Emergency shower and eyewash stations are located at or near TA-54-39, TA-54-31, TA-54-215, ~~TA-54-216~~, and TA-54-35. Waste characterization documentation and MSDS are also available in the event of a chemical exposure. There are several spill kits available at Area L to mitigate small containable spills. These kits typically contain sorbents, neutralizers, PPE, and other equipment essential for containment of small spills. In addition to the spill kits, shovels for cleanup are stored in TA-54-46. Oversized drums and sorbents are also stored at various locations throughout Area L. For larger spills or other unusual hazardous situations, a variety of equipment is available to emergency personnel. This equipment includes forklifts, self-propelled loaders, and other heavy equipment from Area G.

Area G is equipped with an audible alarm system to alert personnel of a fire or the need to evacuate the area. The alarms can be activated by pulling a fire alarm or by pushing the evacuation alarm button. Fire alarms and evacuation alarms are in place at strategic locations to alert personnel of emergency conditions. The fire alarms are located throughout Area G and are connected to the LAFD through the Facility's central alarm system at all times. Flame

or smoke detection equipment is located within structures ~~TA-54-226~~, TA-54-229, TA-54-230, TA-54-231, and TA-54-232. Security personnel and LAFD are notified upon activation of the flame or smoke detectors. Fire control equipment is located throughout Area G. This equipment includes ABC-rated or BC-rated fire extinguishers, dry-chemical fire suppression systems, and several fire hydrants. Trained personnel can use the fire extinguishers to extinguish small, non-chemical fires. For larger fires, security personnel and the LAFD are alerted. Personnel working in Area G also carry alphanumeric pagers, cellular phones, or two-way radios. Emergency paging telephones are in place so that information can be announced throughout the area. This equipment ensures that personnel can contact on-site and Facility emergency personnel at all times. Windsocks are at strategic locations to indicate wind direction and strength. PPE and emergency equipment supplies are stored at various locations throughout Area G. There are different types of monitoring equipment located at the Area G CSUs that are used to qualitatively and quantitatively evaluate airborne contaminants. Alarms and strobe lights warn personnel when airborne concentrations exceed preset limits. They are for use by personnel in emergencies involving chemical or radiological materials. Waste characterization documentation and MSDSs are available in the event of a chemical exposure. First aid equipment can be used to treat injuries until trained medical personnel arrive at the scene. Spill control equipment is maintained at various structures within Area G. Trained personnel use this equipment to mitigate small, containable spills if they know what has been spilled and are sure their actions will not put themselves or others at risk. PPE is also maintained at various structures within Area G and is available for use during routine and non-routine operations to protect personnel from exposure to chemical and radiological contaminants. Warning tapes and barricades are used to post areas and prevent unauthorized entry into restricted areas. Heavy equipment is also available at Area G to move heavy objects.

TA-54-38 at TA-54 West is equipped with an audible alarm system to alert personnel of fire or the need to evacuate the area. Fire alarm pull stations are located throughout the building and can be activated in the event of a fire. Strobe lights mounted at the fire alarms and at TA-54-34, just north of TA-54-38, flash upon activation of the fire alarms to visually alert personnel. The alarm system can also be activated by using evacuation alarm buttons located near the entrances to the building. Upon activation of the evacuation alarm system, horns sound to alert personnel of emergency conditions. The building's manual fire alarm pull stations at TA-54 West are connected to the LACFD through the Facility's central alarm system at all times. The evacuation alarm system is a local system that notifies occupants in TA-54-38 and TA-54-34 of a local emergency. Additionally, a roll-up door between the high and low bays has heat sensitive links attached to a safety chain that melt at a certain temperature and cause the door to close.

TA-54-38 is also equipped with telephones to provide adequate communication and to summon external emergency assistance, if necessary. Paging telephones are located throughout the building and are used to contact on-site personnel. Paging telephones are also used in the event of an emergency to communicate the nature and location of hazardous conditions to personnel in the area. The alarm system is interrupted when the paging telephone system is activated to allow personnel to hear the announcement. Additionally, an emergency telephone is located outside the main entry area. Personnel working within the

building can also use these telephones to summon assistance from local emergency response teams in case of emergency.

Fire control equipment is available for use within TA-54-38 and at the outdoor permitted unit. Portable ABC-rated fire extinguishers are located in the high bay, low bay, and at the outdoor permitted unit. The fire extinguisher located by the east personnel entrance door in the low bay can also be used at the loading dock. Depending on the size of the fire and the fuel source, fire extinguishers can be used by on-site personnel. TA-54-38 is equipped with a ~~pre-action smoke-activated dry pipe~~ sprinkler system by loss of nitrogen pressure (ex. an open sprinkler) anywhere in the building, or by heat detection (high bay and loading dock) or smoke detection (balance of building) in the low bay and with heat-activated dry pipe fire suppression systems in the high bay and at the loading dock. A fire hydrant installed according to National Fire Protection Association standards is located approximately 220 ft west of TA-54-38 near the west entrance to TA-54 West.

A portable chemical spill center is maintained within TA-54-38. It contains sorbents and PPE. Personnel working anywhere within the building have access to this spill center. Trained personnel use this equipment to mitigate small containable spills when they are certain their actions will not put themselves or others at risk. Personnel decontamination equipment available includes a safety shower and eyewash located in the high bay and a safety shower and eyewash on the loading dock.

#### **A.4.6 Preventing Run-on and Runoff**

At TA-54, controlling run-on and runoff at the locations where waste management operations regularly occur is accomplished by appropriate contouring of surface areas and the use of control structures such as drainage channels, berms, and culverts. Canopies, dome structures, and other buildings are used to eliminate or minimize contact between run-on and waste containers. In addition, all stored waste containers are elevated or are placed in areas with sloped floors and sumps to provide protection from liquids that could be introduced through fire-suppression activities. Existing operational controls include inspecting run-on and runoff controls in accordance with Attachment E (*Inspection Plan*) and maintaining the structural run-on and runoff controls, as necessary. Run-on and runoff management methods specific to the Area L, Area G, and TA-54 West permitted units are discussed below.

##### **A.4.6.1 Area L**

The Area L permitted unit is maintained so that structural and operational controls divert storm water to a single outfall. These include asphalt channels, a 12-inch corrugated pipe storm drain to convey storm water to a single outfall at the northeast corner of Area L, and a contoured paved surface to direct storm water to the conveyances. Snow removal is performed to minimize run-on and runoff.





**ATTACHMENT D**  
**CONTINGENCY PLAN**



**Table D-1**  
**TA-50**  
**EMERGENCY EQUIPMENT**

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**FIRE CONTROL EQUIPMENT**

- **FIRE EXTINGUISHERS**

Description of General Capabilities

The fire extinguishers are portable, manually operated units and may be used by any employee in case of fire. They consist of Class ABC or BC rated.

Locations

2 fire extinguishers are located in TA-50-69, Indoor Container Storage Unit (CSU) (Room—102)

1 fire extinguisher is located at the TA-50-69, Outdoor CSU

- **FIRE ALARM PULL BOXES CONNECTED TO THE CENTRAL ALARM STATION**

Description of General Capabilities

Fire alarms may be activated by any employee in the event of fire to notify the Central Alarm Station. Upon activation, fire alarm horns and strobes provide audible and visual signals for personnel notification. The fire alarm is a pulsing sound. ~~The evacuation alarm is a wailing sound that can be heard throughout TA-50-69, Indoor CSU and at the TA-50-69, Outdoor CSU.~~

Locations

Three fire alarm pull stations are located in the TA-50-69, Indoor CSU. Personnel working at the TA-50-69, Outdoor CSU may use the pull stations at TA-50-69 in the event of a fire.

- **AUTOMATIC FIRE SUPPRESSION SYSTEM**

Description of General Capabilities

A wet-pipe automatic sprinkler system that is hydraulically designed for ordinary hazard Group II coverage is in place throughout TA-50-69. This system is activated at 100°C (212°F).

Locations

Throughout TA-50-69, as described above.

- **FIRE HYDRANT**

Description of General Capabilities

Fire hydrants provide water for fire fighting. All fire hydrants are supplied by an 8-inch (in.) water line connected to the 12-in. water main on Pecos Drive.

Location

A fire hydrant is located approximately 55 ft west of TA-50-69.

## **SPILL CONTROL EQUIPMENT**

- **SPILL CONTROL EQUIPMENT**

Description of General Capabilities

The spill control kits may contain items such as absorbents (*i.e.*, pillows and pigs) or weighted tarps. The Emergency Management and Response Group provides additional spill control and clean up equipment as needed.

Spill Control Kit Location

The spill kits are located in TA-50-69 and at the TA-50-69 Outdoor CSU

## **COMMUNICATION EQUIPMENT**

Description of General Capabilities

Telephones ~~with public address (PA) capabilities~~ for internal and external communication are available for use by any employee. Alphanumeric pagers or cellular phones with page/text capabilities are utilized by employees. Employees can be notified of an emergency situation and appropriate response actions through the use of a text message sent to the pagers or phones. Two-way radios may also be utilized for communication. Fire ~~and evacuation~~ alarms are activated in the event of a fire ~~or in case an evacuation is required~~. The fire alarm is a double slow whoop sound. ~~The evacuation alarm is a high-pitched wailing sound. The PA system can be heard at the TA-50-69, Outdoor CSU.~~ When working at the CSUs, personnel will have immediate access to emergency communication equipment either directly or through visual or voice contact with another employee.

Location of Communication Equipment

Telephones ~~with PA capabilities~~ are located in TA-50-69. Personnel working at the TA-50-69, Outdoor CSU have access to the phone outside Room 104, will carry cellular phones, pagers or two-way radios or will have immediate access to communication equipment through visual or voice contact with another employee.

## **DECONTAMINATION EQUIPMENT**

- **SAFETY SHOWERS**

Description of General Capabilities

Safety showers are available to personnel who receive a chemical splash to the skin.

Location of Safety Showers

A safety shower is located in TA-50-69, Room 102. One standard shower is located adjacent to the change room in TA-50-69.

- **EYEWASHES**

Description of General Capabilities

Eyewashes are available to personnel who receive a chemical splash to the eye(s). Specific MSDSs for the chemicals being managed are available hard copy or via online database to personnel working with hazardous or mixed waste to determine if the application of water is indicated for decontamination.

Location of Eyewashes and Material Safety Data Sheets

An eyewash is located in the TA-50-69, Indoor CSU (Room 102). A portable eyewash station will be available during active waste management operations at the Outdoor CSU if waste with free liquids is being managed.

- **PERSONAL PROTECTIVE EQUIPMENT**

Appropriate personal protective equipment (PPE) will be worn to protect from hazards found in the workplace under normal conditions. This PPE may include gloves, steel-toed shoes, and safety glasses. Additional PPE may be required during an unusual hazardous situation and may be found in the spill kits at various locations throughout the site.

- **OTHER**

Continuous air monitors, giraffe monitors, or other appropriated air monitoring equipment (as determine by health physics personnel) may be located in the container storage units for detection of airborne radioactive constituents.

**TABLE D-1**  
**TA-54 AREA L**  
**Emergency Equipment**

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**FIRE CONTROL EQUIPMENT**

Class ABC and BC rated fire extinguishers are located at Area L. Class D rated fire extinguishers are available at Area L if combustible metals are being managed. A dry-pipe sprinkler system is located at TA-54-215.

Dry chemical fire-suppression systems are located in storage sheds TA-54-68, TA-54-69, and TA-54-70.

Description of General Capabilities:

Fire extinguishers may be used by any qualified employee in the event of a small fire. The automatic dry-pipe sprinkler system is heat activated. Security personnel and the Los Alamos Fire Department (LAFD) are alerted when this system has been activated.

Fire alarm pull boxes are located inside TA-54-37, TA-54-39, TA-54-51, TA-54-60, TA-54-117, TA-54-210, and TA-54-221.

Description of General Capabilities:

Fire alarms may be activated by any employee in the event of a fire to notify the LAFD and security personnel.

Fire hydrants are located near the main site entrance to Area L and at the southeast corner of TA-54-62 inside Area L. These fire hydrants supply water at an adequate volume and pressure to satisfy 40 CFR § 264.32(d).

Freeze-proof faucets are located east of TA-54-31.

**SPILL CONTROL EQUIPMENT**

Spill equipment at TA-54 Area L includes the following:

- Shovels
- Oversized drums
- Absorbent (various locations on site)
- Heavy equipment from Area G available for any emergencies at Area L

Spill kits are located throughout Area L. Each kit includes bags of absorbent, caustic neutralizer, acid neutralizer, and an inventory of tools and supplies.

## **COMMUNICATION EQUIPMENT**

Alpha numeric emergency pagers or cellular telephones with page/text capabilities are given to employees working in the area. Telephones are located in TA-54-32, TA-54-55, TA-54-62, and TA-54-1058.

Fire alarm pull boxes are located at TA-54-215

Emergency paging system-loud speaker located throughout the site. Evacuation alarms are located adjacent to the fence line crash gates at Area L, at the northeast end of TA-54-32, the exterior west end of TA-54-215 and at TA-54-62.

Additional equipment includes two-way radios and cellular telephones.

### Description of General Capabilities:

External and internal Laboratory communications which may be used in emergency situations are listed.

Fire alarm may be activated by any employee in the event of a fire to notify the LAFD and security personnel.

Employees can be notified of an emergency situation and appropriate response actions through the use of a text message sent on the emergency alpha-numeric pagers or cellular telephones with page/text capabilities.

The evacuation alarm is a pulsating sound that can be heard throughout Area L. The fire alarm is a double slow-whoop sound.

The emergency paging system can be utilized to alert workers of an emergency situation as well as appropriate response actions. Also personnel will carry cellular telephones, pagers or two-way radios or will have immediate access to communication equipment through visual or voice contact with another employee.

## **DECONTAMINATION EQUIPMENT**

Emergency shower and eyewash stations are located immediately east of TA-54-31, at TA-54-215, at TA-54-35, and at TA-54-39.

Material Safety Data Sheets (MSDS) are available hard copy or via online database at the facility.

### Description of General Capabilities:

Emergency shower and eyewash stations are used by personnel who receive a chemical splash to the skin or eyes. Specific MSDSs for the chemical(s) should be obtained prior to working with the chemical to determine if the application of water is indicated for decontamination.

## **PERSONAL PROTECTIVE EQUIPMENT**

Personnel at Area L are required to use appropriate personal protective equipment (PPE) to protect themselves from the hazards found in the workplace under normal conditions. This PPE may include gloves, steel-toed shoes, and safety glasses. Additional PPE may be required during an unusual hazardous situation or during sampling activities.

Spill kits throughout Area L may contain PPE items such as: gloves, goggles, safety glasses, coveralls, and face shields.



**Table D-2**  
**TA-54 AREA G**  
**Emergency Equipment**

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**FIRE CONTROL EQUIPMENT**

ABC and/or BC rated fire extinguishers are available at TA-54-8, TA-54-33, TA-54-48, TA-54-49, TA-54-153, TA-54-224, TA-54-229, TA-54-230, TA-54-231, TA-54-232, TA-54-283, TA-54-375, and TA-54-412, and on Pads 1, 9 and 10.

Description of General Capabilities:

These portable, manually operated fire extinguishers may be used by any qualified employee in the event of a small fire. For larger fires, security personnel and the Los Alamos Fire Department (LAFD) are alerted.

Flame or smoke detection equipment and fire alarm pull stations will be located within structures at TA-54-229, TA-54-230, TA-54-231, and TA-54-232.

Dry-chemical fire suppression systems are available at TA-54-1027, TA-54-1028, TA-54-1030, and TA-54-1041.

A dry-pipe fire suppression system is available at TA-54-412.

Fire alarm pull stations are available at TA-54-33, TA-54-48, TA-54-49, TA-54-153, TA-54-224, TA-54-229, TA-54-230, TA-54-231, TA-54-232, TA-54-283, TA-54-375, and TA-54-412.

Description of General Capabilities:

Fire alarms may be activated by any employee in the event of a fire to notify the LAFD and security personnel. Security personnel and LAFD are also notified upon activation of the flame or smoke detectors.

Several fire hydrants are located in Area G. These fire hydrants will supply water at an adequate volume and pressure to satisfy the requirements of 40 CFR 264.32(d)

**SPILL CONTROL EQUIPMENT**

Spill control stations and/or portable spill kits are located at TA-54-8, TA-54-33, TA-54-48, TA-54-49, TA-54-153, TA-54-224, TA-54-229, TA-54-230, TA-54-231, TA-54-232, TA-54-283, TA-54-375, and TA-54-412.

Each spill kit generally includes bags of absorbent and an inventory of tools and supplies.

## **COMMUNICATION EQUIPMENT**

Alpha-numeric emergency pagers are given to employees working in the area.

Emergency paging system- loud speakers located throughout the site.

Evacuation alarm buttons are located at or near TA-54-33, TA-54-48, TA-54-49, TA-54-153, TA-54-224, TA-54-229, TA-54-230, TA-54-231, TA-54-232, TA-54-283, TA-54-375, TA-54-412, Pads 1, 9 and 10 and at various muster stations.

Additional equipment includes portable two-way radios and cellular telephones.

### **Description of General Capabilities:**

Loud speakers, telephones and alarms are located throughout Area G. Paging telephones are equipped with public address capabilities. Evacuation alarms have horns mounted on telephone poles throughout Area G. The evacuation alarm is an audible alarm that can be heard throughout Area G. Employees can be notified of an emergency situation and appropriate response action through the use of a text message sent on the emergency alpha-numeric pagers or cellular telephone, or by two-way radio. The emergency paging system can be utilized to alert workers of an emergency situation as well as appropriate response actions.

## **DECONTAMINATION EQUIPMENT**

Portable eyewash stations are located at TA-54 CSUs during waste management operations involving free liquids.

One permanent, hard-plumbed eyewash station and a safety shower is located in TA-54-33.

Material Safety Data Sheets (MSDS) are available hard copy or via online database.

### **Description of General Capabilities:**

Emergency shower and eyewash stations are used by personnel who receive a chemical splash to the skin or eyes. Specific MSDSs for the chemical(s) being managed should be obtained prior to working with hazardous or mixed waste to determine if the application of water is indicated for decontamination.

## **PERSONAL PROTECTIVE EQUIPMENT**

Personnel at Area G are required to use appropriate personal protective equipment (PPE) to protect themselves from the hazards found in the workplace under normal conditions. This PPE may include gloves, steel-toed shoes, and safety glasses. Additional PPE may be required during an unusual hazardous situation and can be found in the spill kits or at various locations throughout the site.

**OTHER**

Continuous air monitors and giraffe monitors (or other appropriate air monitoring equipment) are located in many of the container storage units for detection of airborne radioactive constituents.

Heavy equipment available on site includes:

- Scraper
- Back hoe
- Bulldozer
- Front-end loader

Vehicles available to evacuate personnel from Area G include:

- All-terrain vehicles
- Pickup truck
- Flat-bed truck
- Micro trucks
- Vans

**TABLE D-3**  
**TA-54 WEST**  
**Emergency Equipment**

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**FIRE CONTROL EQUIPMENT**

ABC and/or BC fire extinguishers are available at TA-54-38 in the high and low bays and at the outdoor container storage unit.

Description of General Capabilities:

Fire extinguishers may be used by any employee in the event of a small fire. Security personnel and the Los Alamos Fire Department (LAFD) are alerted when the automatic dry-pipe sprinkler system has been activated.

A ~~dry-pipe~~pre-action sprinkler system is available throughout TA-54-38, including the loading dock area. The ~~dry-pipe~~ sprinkler system is activated by loss of nitrogen pressure (ex. an open sprinkler) anywhere in the system or by heat detection in the high bay and at the loading dock and by smoke detection in the remainder of the building. ~~It is smoke activated in the low bay.~~

Fire alarm pull boxes are available inside TA-54-38 at the main entrance, in the high bay, and in the low bay.

Description of General Capabilities:

Fire alarms may be activated by any employee in the event of a fire to notify the LAFD and security personnel.

A fire hydrant is located west of TA-54-38 near the entrance to TA-54 West. This fire hydrant supplies water at adequate volume and pressure to satisfy 40 CFR § 264.32(d).

A wall hydrant is located on the west side of TA-54-38.

Freeze-proof faucets are located on the west, south, and east sides of TA-54-38.

**SPILL CONTROL EQUIPMENT**

A mobile response kit is located at TA-54-38. The kit includes absorbent socks, pillows, and sheets; goggles; and large plastic bags.

**COMMUNICATION EQUIPMENT**

Evacuation alarm buttons are located at the high bay, the low bay, and the main entrance to TA-54-38.

Telephones with public address (PA) capabilities are located in TA-54-38 in the high bay, in the low bay, and outside the main entrance. An emergency telephone is also located outside the main entrance.

Alpha-numeric emergency pagers are given to employees working in the area.

Additional equipment includes cellular phones.

Description of General Capabilities:

Telephones with PA capabilities for internal and external communication are available for use by any employee. Employees can be notified of an emergency situation and appropriate response actions through the use of a text message sent on the emergency alpha-numeric pagers, cellular telephones, or by two-way radio. The evacuation alarm can be heard throughout TA-54-38 and TA-54-34. The fire alarm is a double slow-whoop sound. Fire and evacuation alarms are activated in the event of a fire or evacuation. The emergency paging phone can be utilized to alert workers of an emergency situation as well as appropriate response actions.

**DECONTAMINATION EQUIPMENT**

Safety showers and portable eyewash stations are located in TA-54-38 in the high bay and on the loading dock. The portable eyewash stations will be present during active waste management operations involving free liquids at these locations.

Material Safety Data Sheets (MSDS) are available hard copy or via online database.

Description of General Capabilities:

Safety showers and eyewashes are used by personnel who receive a chemical splash to the skin or to the eyes. Specific MSDSs for the chemical(s) being managed should be obtained prior to working with mixed waste to determine if the application of water is indicated for decontamination.

**PERSONAL PROTECTIVE EQUIPMENT**

Personnel at TA-54 West are required to use appropriate personal protective equipment (PPE) to protect themselves from the hazards found in the workplace under normal conditions. This PPE includes gloves, steel-toed shoes, and safety glasses. Additional PPE may be required during an unusual hazardous situation and can be found in the spill kits or at various locations throughout the site or at adjacent TA-54 facilities.

Gloves and goggles are found in the spill kits located at TA-54-38.

All workers located within the operating limits of a crane (fixed or mobile) wear hard hats.



**ATTACHMENT E**  
**INSPECTION PLAN**





## **Part I**

***Weekly and daily inspection of TSDs will be conducted in accordance with the inspection plan in most recent Los Alamos National Laboratory (LANL) General Part B Permit Application or the LANL Hazardous Waste Facility Permit, as appropriate. Not all items in this section will apply to all facilities. An “NA” (not applicable) is required if the item does not apply. Facilities may shade parts of the form to indicate items that need to be completed only on a weekly basis. Holidays and Laboratory closures can also be noted (e.g., by writing “H” (for holidays) or “Closed” in the first box and drawing a line all the way down the page).***

1. Location information, including TA, building, room (if applicable), and any other location descriptors that may be necessary (e.g., TA-59-3-114 or TA-59-1-S, Dock).
2. A site identification number is assigned to every facility by the Resource Conservation and Recovery Act (RCRA) compliance personnel. This allows for ease in identification.
3. Start date of Monday for the week of record.
4. End date of Sunday for the week of record.
5. Check the appropriate box for the type of operation. Several boxes may be checked, if necessary, for those locations where inspections are combined on a single sheet. You must have prior approval from RCRA compliance personnel to combine inspections for more than one unit.
6. For container storage units only – “NO USE” may be checked (or marked “OK”) if waste was not stored at the unit for the week in question. When this box is checked, the individual responsible for the inspection must only complete this box, the items related to site location (Items 1-5), and the inspector name section for that week (Items 29-31). If any hazardous or mixed waste is subsequently placed at the site for any reason, a full inspection must be performed immediately and then subsequently according to the appropriate inspection plan.
7.
  - a. At a container storage unit if waste is in storage but no waste is handled at the unit for the week– “NO WASTE HANDLING” may be checked, but a weekly inspection in accordance with the appropriate inspection plan must be conducted.
  - c. If a treatment unit is not conducting treatment for the week – “NO WASTE HANDLING” may be checked, but a weekly inspection in accordance with the appropriate inspection plan must be conducted.
  - d. For a tank storage system unit, if no waste is being stored and the tank system is empty, “NO WASTE HANDLING” may be checked. However, a weekly inspection in accordance with the appropriate inspection plan must be conducted.
8. Communication equipment must be inspected in order to ensure availability and proper operating condition for each piece of equipment (e.g., telephones, radios, and alarms). Equipment must be present in accordance with the appropriate contingency plan.
9. Required signs must be legible and prominently posted in accordance with 40 CFR § 264.14(c) and/or the permit as applicable. Signs at large outdoor storage areas may be inspected semi-annually as necessary to prevent deterioration.

10. Site security must be verified. Items such as fences, gates, locks, and other access control equipment (as appropriate) should be checked for proper operating condition or mitigative measures.
11. Roads, process floors, and other work surfaces at TSDs must be inspected for any conditions that could lead to a spill or an accident. Inspection includes structures and base materials and malfunctions, deterioration, operator errors, and discharges.
12. Hazardous or mixed waste TSDs must have fire control and spill control equipment. Equipment must be present, in proper operating condition, and appropriate for the material in question. Hose bibs, where present, should be inspected for proper operating condition and adequate pressure. Outdoor fire-water supply systems must be checked for freezing and damage. Equipment must be inspected and present in accordance with the appropriate inspection and contingency plans.
13. Where present, eyewashes and safety showers must be inspected to ensure proper operating condition or that scheduled routine inspections have been conducted and documented. Outdoor locations must be checked for freezing.
14. Wind socks, where present at outside TSDs, must be inspected to ensure that they are in proper operating condition/functional and checked for damage.
15. Secondary containment structures for hazardous or mixed waste operations must be inspected to verify proper operating condition and to ensure adequate capacity. Structures must also be inspected for the presence of standing water or hazardous/mixed waste or any other indication of a spill (*i.e.* discolored vegetation, soil, or concrete). For certain operations, secondary containment includes inspection of gloves, gloveboxes, hoods, and ventilation systems. For locations where inflatable “Porta Berms” are used, inspectors must ensure that they are adequately inflated. All monitoring and leak detection systems must also be checked.
16. Loading and unloading areas must be inspected daily when in use for signs of damage or deterioration that may lead to an accident or spill. This includes asphalt covered areas and areas where containers or tanks are handled or the contents thereof are transferred.
17. Run-on and runoff controls, wherever present, must be checked. The integrity should be inspected by looking for signs of damage, erosion, ponding, or any other conditions that could lead to a spill or an accident.
18. All tanks and containers used for storing hazardous or mixed waste must have the cover or lid securely in place. Containers are not considered to be closed until the lid/cover is fastened in the manner the manufacturer originally intended. However, the lid may be off of a tank or container while waste is being placed into or removed from a container.
19. All containers and tanks containing hazardous or mixed waste must be labeled with the words “HAZARDOUS WASTE,” and EPA Hazardous Waste Numbers or hazardous waste constituents. They must also be marked with a legible accumulation start date. All containers must be dated when they arrive at the facility and no hazardous or mixed waste may be stored for over one year, unless specifically exempted.

20. All hazardous or mixed waste containers holding materials that may be incompatible with any other materials at that location must be separated from those materials by dikes, berms, or other physical barriers to prevent a possible reaction.
21. All containers and tanks must be checked for structural integrity, leakage, corrosion, or damage that may impact integrity. This includes checking the condition of all construction materials, fixtures, seams, and auxiliary equipment. There are special inspection criteria for tank systems (see Item 24 below).
22. Adequate aisle space must be maintained to allow for inspection and for the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency. Containers of hazardous and mixed waste must be stored in a manner that ensures a minimum 2-foot aisle space and containers may not be stacked more than 3 high, unless otherwise specified for the facility (*i.e.* some units within the LANL Hazardous Waste Facility Permit must have an aisle space of 28 inches and only 55 gallon drums may be stored three high). Please consult RCRA compliance personnel for permit related questions.
23. Hazardous or mixed waste containers stored at TSDs must be on pallets, elevated, or otherwise raised to be protected from contact with accumulated liquid.

#### **TANKS SYSTEMS:**

24. For tank systems used for treatment or storage of hazardous or mixed waste, all aboveground portions of the tank system, including any and all ancillary plumbing, must be inspected for signs of leaking, corrosion, deterioration, or improper operation. Tanks must be operated with a minimum freeboard of 6 inches. If the tank system includes discharge controls, overtopping controls, tank level alarms, or other monitoring equipment, including leak detection equipment, all controls and relevant data must be checked to ensure they are operating properly and that operation is within design specifications for the system.

#### **SHAFTS:**

25. Shafts used for retrievable storage should have their covers securely in place and the surrounding area should show no evidence of erosion. Disposal shafts and shafts used for retrievable storage should have their covers securely in place and, during waste handling operations, guard rails must be installed and in good condition. Landfill covers must be inspected at least weekly and after storms for evidence of erosion, subsidence, and water intrusion.

#### **OPEN BURNING UNITS:**

26. Open burning units must be inspected for deterioration, leakage, vegetation in the immediate vicinity that could catch fire, and assure that the unit is covered when not in use. Inspectors must also look for explosives and debris not consumed during the burn.

#### **OPEN DETONATION UNITS:**

27. Open detonation units must be inspected for deterioration, leakage, or vegetation in the immediate vicinity that could catch fire. Inspectors must also look for explosives and debris not consumed by the detonation.

#### **STABILIZATION UNITS:**

28. The structural integrity and condition of equipment and systems must be inspected on stabilization units. Units must also be inspected for signs of leaking, corrosion, deterioration, or improper operation.

**FOR ALL INSPECTIONS:**

29. Record of the date of the current inspection. Only one date is given for each inspection, whether a team or an individual performs the inspection.
30. Record of the time of the current inspection. Only one time is given for each inspection, whether a team or an individual performs the inspection.
31. Legible and/or printed name of each inspector involved in the current inspection.

**PART II**

***List any action required.***

32. Document any action taken immediately and express any plans for future action to be taken. Also, ensure that previous ARs are closed out with completed actions described. If the AR has not been resolved, ensure that it is carried over to the current inspection. Status should be provided for both open and closed items. If necessary, attach additional sheets to inspection record form to efficiently cover the action taken or required. Initial any information or comments added, and if more than one action is required or conducted, assign a number to each AR.

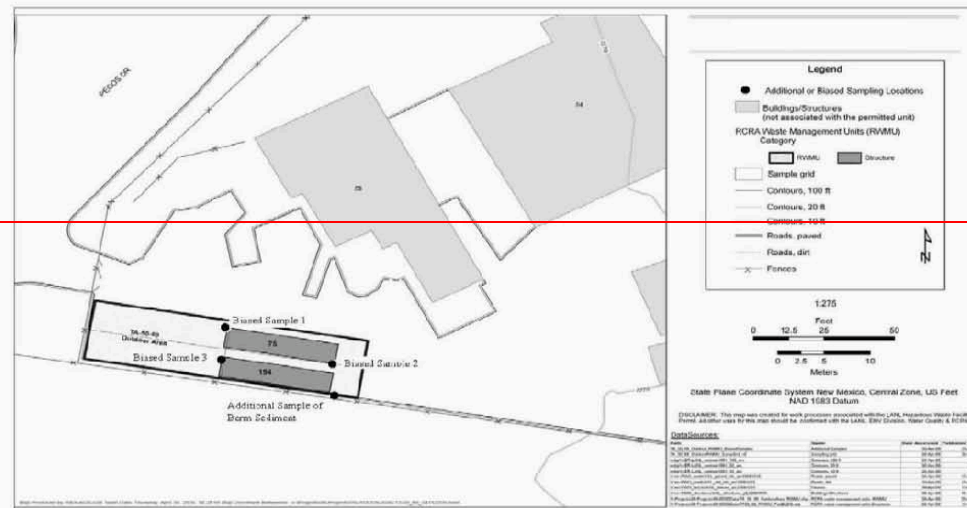
**PART III**

***Identify any comments.***

33. Document informational comments and any status associated with the current inspection that does not require specific regulatory action or remedies.

**ATTACHMENT G.5**  
**TECHNICAL AREA 50, BUILDING 69**  
**OUTDOOR CONTAINER STORAGE UNIT**  
**CLOSURE PLAN**





**Figure G.5-1: Technical Area (TA) 50, Building 69, Outdoor Container Storage Unit Sample Grid and Additional Sampling Locations**



**Figure G.5-1: Technical Area (TA) 50, Building 69, Outdoor Container Storage Unit Sample Grid and Additional Sampling Locations**



**ATTACHMENT G.6**  
**TECHNICAL AREA 54, AREA G, PAD 1**  
**OUTDOOR CONTAINER STORAGE UNIT**  
**CLOSURE PLAN**



## 1.0 INTRODUCTION

This closure plan describes the activities necessary to close the outdoor hazardous waste container storage unit at Technical Area (TA)-54, Area G, Pad 1 at the Los Alamos National Laboratory (Facility), hereinafter referred to as the permitted unit. The information provided in this closure plan addresses the closure requirements specified in Permit Part 9 and the Code of Federal Regulations (CFR), Title 40, Part 264, Subparts G and I for hazardous waste management units 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 to the plan, 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 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 description of the permitted unit can be found in Permit Attachment A (*Technical Area Unit Descriptions*). This section of the closure plan provides a description of the permitted unit which is located in the north-eastern portion of Area G and is comprised of an asphalt pad with ~~the structure~~~~three structures~~ (Building 412 (the Decontamination and Volume Reduction System (DVRS), ~~the Mobile Visual Examination and Repackaging (MOVER), and support trailer for the MOVER~~) situated on it.

The irregularly-shaped asphalt pad is approximately 358 feet (ft) long and 213 ft wide or approximately 76,000 square feet. The pad, which is sloped 1% to 1.5% to the south and south-east for drainage, consists of a four to six inch (in) layer of asphalt over the underlying base course overlying fill (minimum six inches of tuff). The pad has ~~one structure~~~~three structures~~ associated with it: Building 412 (DVRS); ~~the MOVER; and the MOVER's support trailer~~. Storage of mixed waste occurs ~~only~~ on the Pad and in Building 412.

Dome 226, which was decommissioned in October 2009, was located on the eastern portion of the permitted unit. The dome was approximately 286 ft long and 89 ft wide, was built of an aluminum framework of trusses covered with tension-fitted ultraviolet resistant, fire-retardant coated, polyester fabric anchored with bolts to the pad's concrete ring wall and had a surface area of about 22,300 square ft. The interior floor perimeter of the dome was surrounded with a 6-inch-high, 6-inch-wide asphalt curb and was equipped with personnel doors and a roll-up door on the south end for vehicle access. A ramp was located at the vehicle entrance to the dome, which allowed vehicles and container handling equipment to pass safely over the interior curb which prevented run-on into the dome. At the southern end of the dome was a drain connecting to the recessed sump in Pad 9's Dome 229. This fire protection drain system consists of a 10 in. line running southeast from where Dome 226 was located with secondary connecting drains from Domes 232 and 231. The purpose of this drain system was to provide additional fire water collection capacity in the event of an emergency. The sump and drain have been plugged to prevent storm water from entering the system at the drainage point. Building 412 is a one story building that is approximately 220 ft long by 60 ft wide or 13,200 square ft. This building is currently used for storage and volume reduction of bulky mixed waste. It consists of two structures: an internal primary confinement structure that houses mixed waste processing operations; and an external confinement building, which contains the primary confinement structure. The building itself provides protection from the elements and a temperature-controlled space for the internal structures and associated process equipment. There are roll-up vehicle-access loading doors on

the north and south ends of the building and personnel access doors on the north, east, and south for support of operations. The floor and foundation of the building are concrete and the floor is painted with an epoxy sealant. The concrete slab is above grade to direct potential run-on away from the building. The floor in the building is sloped to a sump that has a grating cover to provide traction and a level working surface.

The primary confinement structure is housed entirely within the building and consists of interconnected enclosures. The primary confinement is approximately 150 ft long by 50 ft wide by 16 ft high and sits directly on the sealed concrete floor. The primary confinement interlocks in a self-supporting steel framework that can be assembled into multiple configurations. It is equipped with both large roll-up doors so that personnel, equipment, and material can access the primary confinement and move from one enclosure to the next. Equipment in the enclosures includes gloveboxes, dismantling tools (e.g., power saws, hammers, pry bars), shearing and bailing equipment. Building 412 contains fire protection piping as well as heating and ventilation ducting.

~~The MOVER is a 10 x 40-ft transportainer that contains a glovebox utilized to visually examine and repackage the contents of high activity transuranic waste drums. The MOVER unit is a certified DOT 7A Type A Container (CPC 1998). The MOVER is classified as a Type II (000) structure per NFPA 220, *Standard on Types of Building Construction*. Interior walls are constructed as double-walled for containment purposes with sealed and polished stainless steel interior for ease of decontamination. The outside walls of the MOVER are constructed of carbon steel. The walls are insulated with cellulose, which is manufactured under Consumer Product Safety Commission performance criteria mandating fire standards. The interior and exterior of the MOVER are non-flammable metal with steel stud construction. All electrical systems are designed to the National Electrical Code.~~

~~The MOVER is comprised of 3 rooms consisting of a control room, a glovebox operations room, and the drum entry room. The control room provides space for personnel entry, a portal radiation monitor, and system controls. There are doors between each section to isolate each room. Doors are kept closed during the glovebox operations to maintain negative pressure in the unit. Airflow direction is maintained so that air flows from areas of low contamination to areas of potentially higher contamination before being exhausted through the HEPA ventilation system. The unit has continuous air and fixed head monitors, intercom system, fire protection system, HVAC, and lighting.~~

~~The glovebox operation room contains the glovebox, drum lifter, HEPA filters and differential pressure-monitor panel. The drum entry room is located at one end of the trailer. This room provides space for four standard 55-gallon drums on transport dollies. Transuranic waste drums are bagged into the glovebox and opened. The contents are examined and then bagged out into another drum(s). Nonconformance items are identified and bagged out into a third drum. The empty parent drum and newly filled drum(s) are then removed from the MOVER unit.~~

~~The glovebox is 12 feet long, 2.75 feet high and the end is 2.3 feet wide at the top. The glovebox component is fabricated from Type 304L stainless steel and includes a HEPA ventilation system.~~

~~The MOVER support trailer is a 8 x 20-ft metal trailer that houses ventilation blowers and monitored discharge system, the fire suppression system, and electrical distribution system for the MOVER.~~

The permitted unit has been used for the storage of both liquid and non-liquid mixed waste and has stored the following waste types: solidified inorganic solids; leached process residues; salts and cement paste; ash; dewatered aqueous sludge; chemical treatment sludge; soils; combustible debris (e.g., plastics, rubber, laboratory trash, building debris); and heterogeneous debris.

## 5.2 Records Review and Structural Assessment

After waste removal and before starting decontamination and sampling activities, the Operating and Inspection Records for the permitted unit will be reviewed and an assessment will be conducted to determine any finding(s) or action(s) that may influence closure activities or additional sampling locations.

### 5.2.1 Records Review

The Facility Operating and 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 any spills or chronic conditions identified in the Operating and Inspection Records).

### 5.2.2 Structural Assessment

An assessment of the permitted unit's physical condition will be conducted in accordance with Permit Section 9.4.6.2. The assessment will include inspecting the asphalt pad for any existing cracks or conditions that indicate the 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 Surfaces, 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 structures and related equipment will be decontaminated, removed, or both and managed appropriately. All waste material will be controlled, handled, characterized, and disposed of in accordance with Permit Attachment C (*Waste Analysis Plan*), Permit Section 9.4.5, and Facility waste management procedures. Decontamination activities will ensure the removal of all hazardous waste residues and hazardous waste constituents from the permitted unit to meet the closure performance standards outlined in Permit Section 9.2.

### 5.3.1 Removal of Surfaces, 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.

Building 412 (and its ancillary equipment), ~~the MOVER, and its support trailer~~ will be removed before the assessment. The asphalt pad, and all the materials associated with the pad (*e.g.*, concrete ringwall, sump, minimum of six inches of the base course and soil underlying the pad), will be removed after the assessment and before soil samples are collected. If, after the removal of the pad (and underlying soil and base course material), the remaining surface shows evidence that the removal to that point has not gathered all appropriate soils and materials associated with the pad (*e.g.*, additional concrete or base course materials), additional soil and materials will be removed. If it is determined to be appropriate at the time of the structural assessment, soil samples may be collected through the asphalt (before the pad and its materials have been removed) from areas where contamination is suspected (*i.e.*, locations of stains or known spills).

In the event that alternative closure requirements, in accordance Permit Section 9.2.2.2, are applied to the closure of this permitted unit, the Permittees shall take precautions to not remove or disturb the soil or tuff that overlies the regulated unit (covered under the March 1, 2005 Compliance Order on Consent (Order) (see Permit Section 9.3)) beneath the permitted unit.

### **5.3.2 Decontamination of Structures and Related Equipment**

All surfaces, structures, and related equipment that will be reused by the Facility will be decontaminated in accordance with Permit Section 9.4.3.1. This includes: the gloveboxes, enclosure components, the cabinets in Building 412; bailing equipment; portable air monitors; all electronic devices and tools; and spill cleanup equipment containers in Building 412, ~~the MOVER, and the support trailer~~. This list of equipment requiring decontamination may be revised during the review and assessment which would result in an amendment to this closure plan.

Water-resistant equipment and operating machinery (*i.e.*, the gloveboxes, enclosure components, and cabinets) not sensitive to water intrusion will be decontaminated by steam cleaning, or pressure washing, with a solution consisting of a surfactant detergent (*e.g.*, Alconox®) and water and mixed in accordance with the manufacturer's recommendation. All other equipment at the permitted unit that is sensitive to water intrusion (*i.e.*, the bailing equipment, portable air monitors, electronic devices or tools, and spill cleanup equipment containers) will be decontaminated by washing using a wipe-down method with a solution consisting of a surfactant detergent (*e.g.*, Alconox®) and water and mixed in accordance with the manufacturer's recommendation.

The quantity of the wash solution will be minimized by dispensing from buckets, spray bottles, or other types of containers. The sump in the DVRS building will be plugged before decontamination activities begin to ensure that none of the wash water solution enters the drain on the floor. Cloths, or other absorbent cleaning devices, will not be reused to wipe down the equipment after being wetted in the wash solution or after spraying solution onto the equipment. Portable berms or other such devices (*e.g.*, absorbent socks, plastic sheeting, wading pools, existing secondary containment) will collect excess 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.6-2, 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 and analytical methods as well as the 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 Sampling Activities**

Soil sampling and decontamination verification sampling activities will be conducted at the permitted unit in order 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 at the permitted unit.

~~In compliance with Permit Section 9.4.7.1.i, this closure plan will ensure the collection of wipe samples from the walls, the floor, and the ceiling of the MOVER for a minimum of five wipe samples.~~

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

~~a. one sample every 250 square feet in the loading/unloading zone outside the MOVER (see Permit Section 9.4.7.1.ii(1));~~

~~b.a.~~ one sample every 900 square feet of the permitted unit for a total of 64 soil samples (see Permit Section 9.4.7.1.ii(2));

~~e.b.~~ one sample just off the southeast edge of the permitted unit where stormwater runs off the pad (see Permit Section 9.4.7.1.ii(3));

1. if the soil sample collected at the southeast edge of the permitted unit detects hazardous constituents, ten samples shall be collected along the swale between the permitted unit and Pad 10 (see Permit Section 9.4.7.1.ii(8)) (see Figure G.6-2).

~~d.c.~~ one sample at the rock check dam at the far southeast end of Area G where stormwater discharges (see Permit Section 9.4.7.1.ii(3));

1. if the soil sample collected at the rock check dam detects hazardous constituents, ten samples shall be collected along the swale between the permitted unit and Pad 10 (see Permit Section 9.4.7.1.ii(8)) (see Figure G.6-2).

~~e.d.~~ one sample at the floor drain at the south end of the permitted unit underlying the removed Dome 226 and one sample at the sump in Building 412 (see Permit Section 9.4.7.1.ii(5)); and

~~f.e.~~ one sample at all the joints and intersections of the ten inch fire protection drain line running southeast and then east toward Pad 9 TWISP domes (see Permit Section 9.4.7.1.ii(7)).

Figures G.6-1 and G.6-2 illustrate these respective sampling locations at the permitted unit.

If there is liquid found in either the drain lines or the sumps at the time of the assessment liquid samples will be collected in accordance with Section 6.2.1 of this closure plan.

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.6-1). 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 within the area of the sampling box (e.g., at a asphalt cracks), these sample collection locations will be in addition to the grid sampling locations.



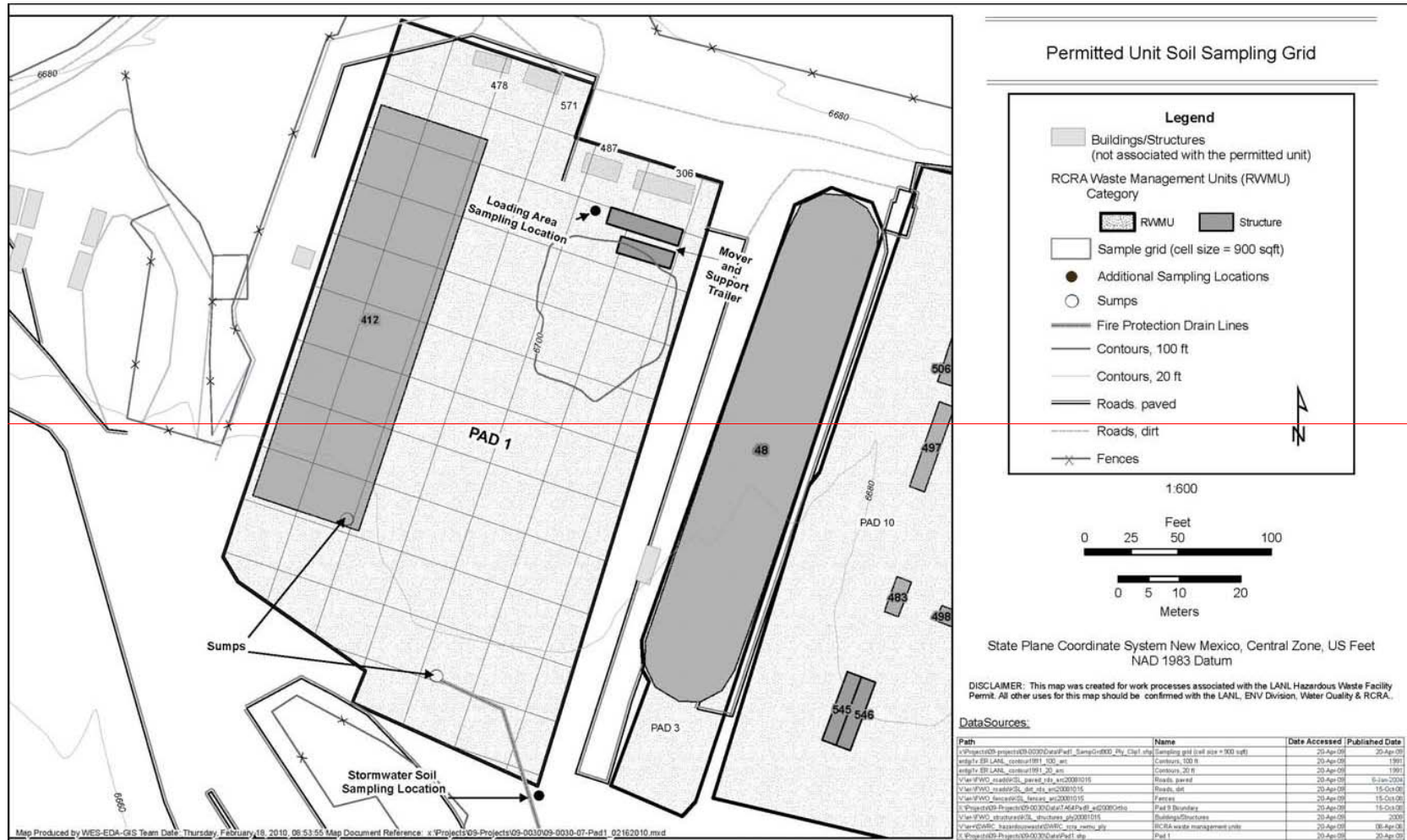
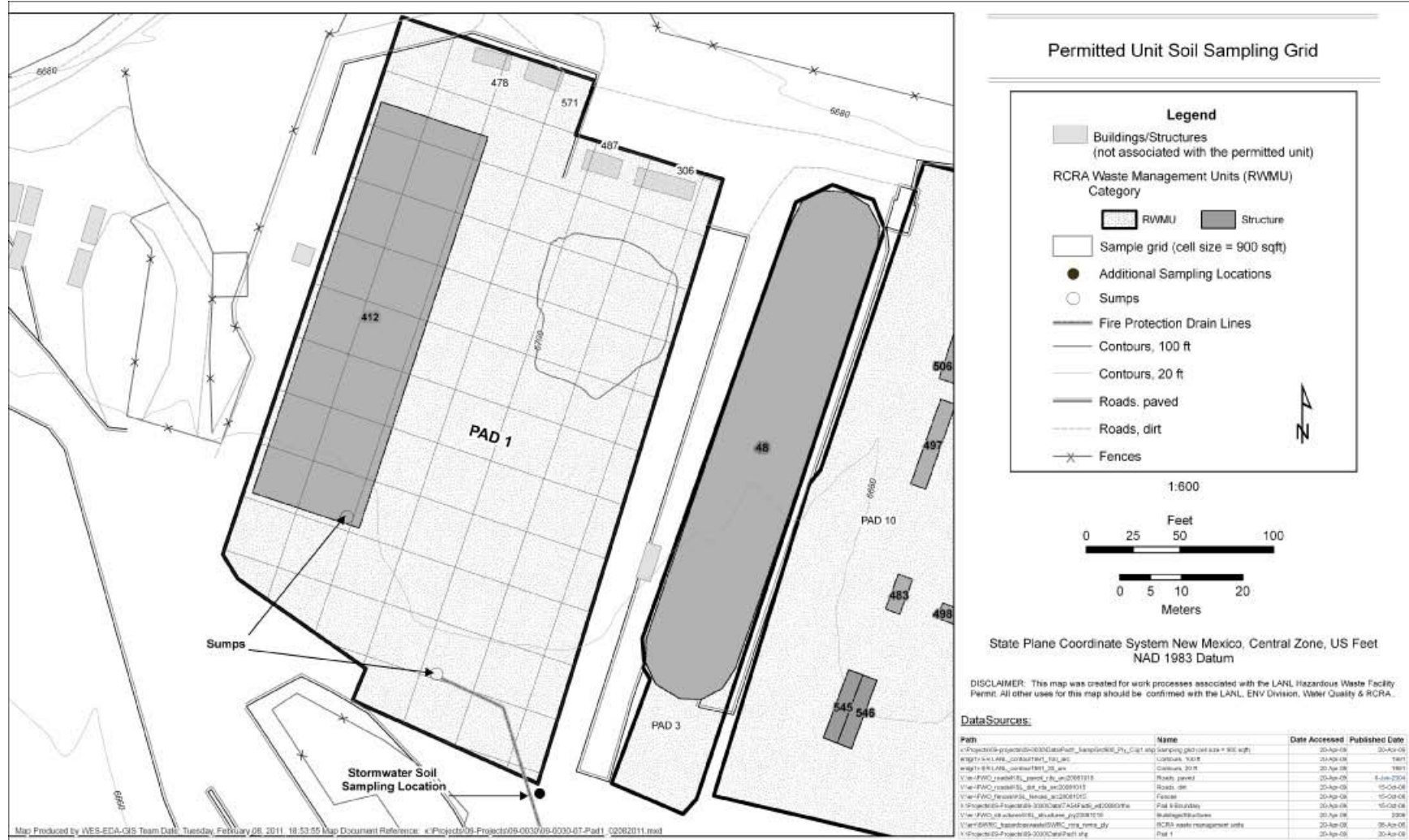


Figure G.6-1: Technical Area 54, Area G, Pad 1 Outdoor Container Storage Unit Grid Sampling Locations





**Figure G.6-1: Technical Area 54, Area G, Pad 1 Outdoor Container Storage Unit Grid Sampling Locations**



**ATTACHMENT G.10**  
**TECHNICAL AREA 54, AREA G, PAD 9**  
**OUTDOOR CONTAINER STORAGE UNIT**  
**CLOSURE PLAN**



## 1.0 INTRODUCTION

This closure plan describes the activities necessary to close the outdoor hazardous waste container storage unit at Technical Area (TA)-54, Area G, Pad 9 at the Los Alamos National Laboratory (Facility), hereinafter referred to as the permitted unit. The information provided in this closure plan addresses the closure requirements specified in Permit Part 9 and the Code of Federal Regulations (CFR), Title 40, Part 264, Subparts G and I for hazardous waste management units 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 to the plan, 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 to provide updated sampling and analysis plans and to incorporate updated decontamination technologies. Amended closure plans shall be submitted to the New Mexico Environment Department (Department) for approval prior to implementing closure activities.

## 2.0 DESCRIPTION OF UNIT TO BE CLOSED

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

The permitted unit is comprised of an asphalt pad which is located in the eastern end of Area G. It was constructed in 1993, consists of a four to six inch layer of asphalt over the underlying base course overlying fill (minimum six inches of tuff), and measures 570 feet long and 275 feet wide, or approximately 158,000 square feet. It is constructed with curbing on the west and east sides and is sloped from 1% to 1.5% to the east and south-east for drainage. Rainwater flow is directed across the pad by the eastward slope and through small PVC drains spaced at 55 foot intervals in the curbing along the east side of the pad. The slope below the curbing is protected with rock and concrete. Concrete curbing also extends along the west and partially the south sides of the pad and ends at a concrete and rock drainage structure. The remainder of the south side of the pad is uncurbed. Four domes (Domes 229, 230, 231, 232), ~~one transportainer (362)~~, and two storage sheds (484 & 574) are situated on it (see Figure G.10-1). The two storage sheds are not used for the storage of hazardous waste.

The permitted unit has stored the following waste types: solidified inorganic solids; leached process residues; salts and cement paste; ash; dewatered aqueous sludge; chemical treatment sludge; soils; combustible debris (e.g., plastics, rubber, laboratory trash, building debris); and heterogeneous debris. 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.

### 2.1 Permitted Unit Domes

The four storage domes ~~and the transportainer (362)~~ at the permitted unit have been used for the storage of hazardous waste in both liquid and solid form since 1994. The domes (an aluminum framework of trusses covered with tension-fitted ultraviolet resistant, fire-retardant coated, polyester fabric) are 246 feet long by 89 feet wide and cover a surface area of approximately 20,400 square feet each. The base of each dome is secured with anchor bolts to a concrete ring wall that surrounds the interior floor perimeter and

Soil sampling and decontamination verification sampling activities will be conducted to demonstrate that soils, surfaces, structures, and related equipment 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 completed within 180 days after the final receipt of waste. In the event that closure of the permitted unit can not 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 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 the procedures to be used for closure of 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 from the permitted unit. Appropriate shipping documentation will be prepared for 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 finding(s) or action(s) that may influence closure activities or additional sampling locations.

#### **5.2.1 Records Review**

The Facility Operating and 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 any 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 floors, walls, and ceilings in the ~~transporter and the~~ PermaCon<sup>®</sup>, as well as inspecting the asphalt pad, 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 applicable sampling 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 structures and related equipment will be decontaminated, removed, or both and managed appropriately. All waste material will be controlled, handled, characterized, and disposed of in accordance with Permit Attachment C (*Waste Analysis Plan*), Permit Section 9.4.5, and Facility waste management procedures. 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 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 PermaCon<sup>®</sup> and the tensioned-fabric membranes on the domes (as well as the aluminum beams, trusses, and ancillary equipment supporting the domes) will be removed before the assessment. The asphalt pad, the materials associated with the asphalt pad (*e.g.*, concrete ringwall, sumps, liner) and a minimum of six inches of the base course and soil underlying the asphalt pad will be removed after the assessment.

If after the removal of the pad (and underlying soil and base course material) the remaining surface shows evidence that the removal to that point has not gathered all appropriate soils and materials associated with the pad, additional soil and materials will be removed. If it is determined to be appropriate at the time of the assessment, soil samples may be collected through the asphalt (before the pad and its materials have been removed) from areas where contamination is suspected (*i.e.*, locations of stains or known spills).

In the event that alternative closure requirements, in accordance Permit Section 9.2.2.2, are applied to the closure of this permitted unit, the Permittees shall take precautions to not remove or disturb the soil or tuff that overlies the regulated unit (covered under the March 1, 2005 Compliance Order on Consent (Order) (*see* Permit Section 9.3)) beneath the permitted unit.

#### 5.3.2 Decontamination of Equipment

All structures and related equipment that will be reused by the Facility will be decontaminated in accordance with Permit Section 9.4.3.1. This includes: ~~the transportainer~~; the portable air monitors; all electronic devices and tools; and the spill cleanup equipment containers from within the domes (*see* Table G.10-6). This list of equipment requiring decontamination will be revised, if necessary, during the review and assessment.

Equipment and operating machinery that is not sensitive to water intrusion, such as ~~the transportainer and the equipment cabinets~~ in Dome 231 will be decontaminated by pressure washing or steam cleaning with a solution consisting of a surfactant detergent (*e.g.*, Alconox<sup>®</sup>) and water mixed in accordance with the manufacturer's recommendations. All other equipment at the permitted unit that is sensitive to water intrusion (*i.e.*, portable air monitors, electronic devices or tools, PPE, portable eyewashes, spill cleanup

equipment containers) will be decontaminated by washing using a wipe-down method with a solution consisting of a surfactant detergent (e.g., Alconox<sup>®</sup>) and water mixed in accordance with the manufacturer's recommendations.

The quantity of the wash solution will be minimized by dispensing from buckets, spray bottles, or other types of containers. Cloths, or other absorbent cleaning devices, will not be reused to wipe down the equipment after being wetted in the wash solution or after spraying solution onto the equipment. Portable berms, or other such devices (e.g., absorbent socks, plastic sheeting, wading pools, existing secondary containment), will collect excess wash water and provide containment during the decontamination process. The fire suppression water drains in domes 229, 231 and 232 will be plugged so as to not allow wash water to enter.

#### 5.4 Equipment Used During Decontamination Activities

Reusable protective clothing, tools, and equipment used during closure decontamination activities will be cleaned with a wash water solution. Residue, disposable equipment, and equipment that cannot be decontaminated will be containerized and managed as waste, as summarized in Table G. 10-2 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 and 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 Sampling Activities

Soil sampling and decontamination verification sampling activities will be conducted at the permitted unit in order 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.i, this closure plan will ensure the collection of at least one wipe sample from the walls, the floor, and the ceiling of the transportainer for a total of 6 wipe samples.~~

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

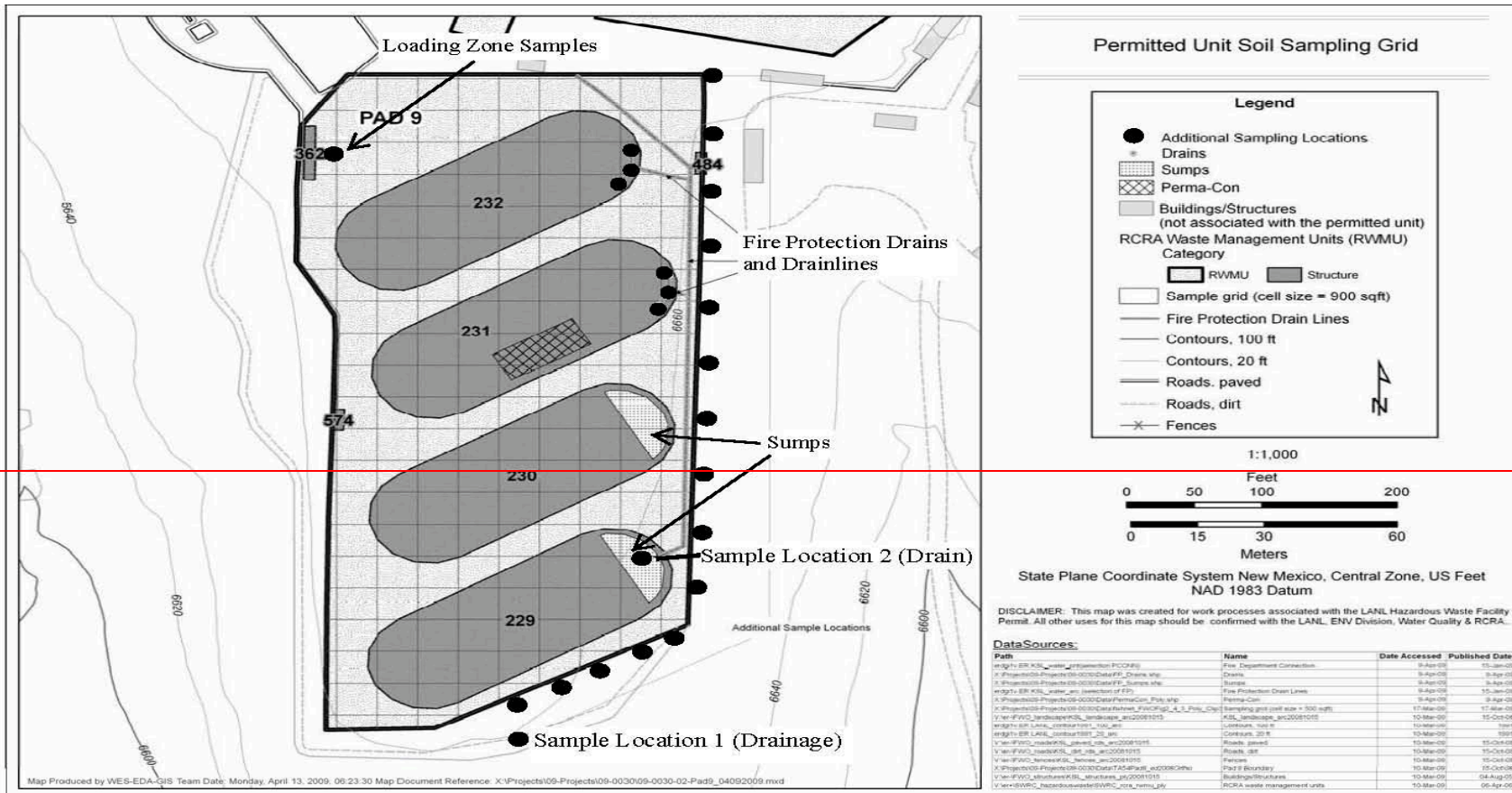
- a. ~~one sample~~ two samples in front of where structure 362 was located ~~the transportainer~~ (see Permit Section 9.4.7.1.ii(1));
- b. one sample every 900 square feet of the permitted unit for a total of 170 samples (see Permit Section 9.4.7.1.ii(2));
- c. one sample to the south of the permitted unit at the stormwater discharge drainage location ('sample location 1') (see Permit Section 9.4.7.1.ii(3));
- d. one sample at the discharge point in the sump in Dome 229 for the fire water collection system ('sample location 2') (see Permit Section 9.4.7.1.ii(4));



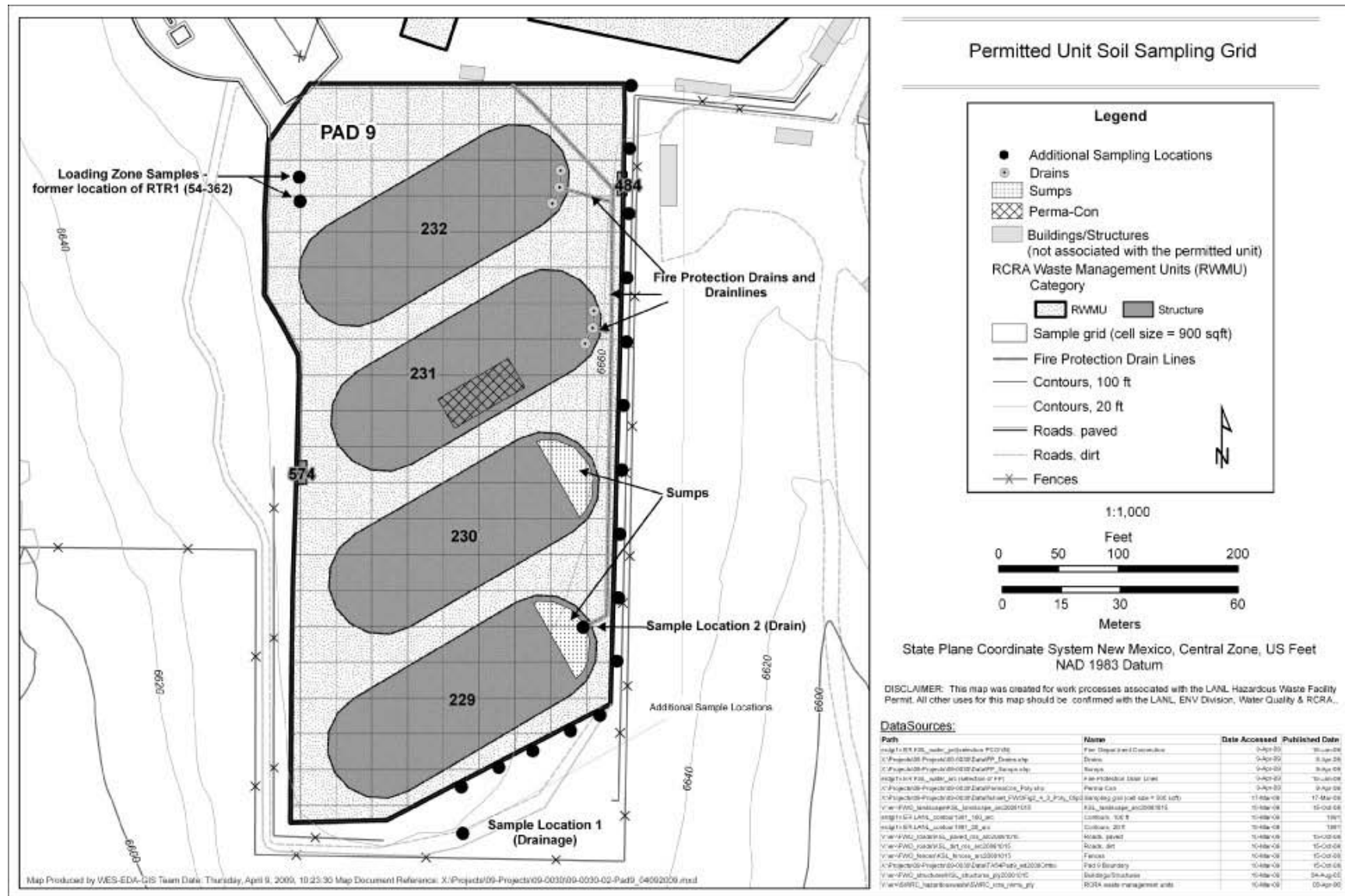
**Table G.10-6**

**List of Equipment at the Technical Area 54, Area G, Pad 9 Outdoor Container Storage Unit**

Equipment	Decontamination	Disposal
PermaCon <sup>®</sup> in Dome 231 and associated equipment	X	
<del>Transportainer</del>	<del>X</del>	
Two storage sheds	X	
Equipment and spill kit cabinets	X	
Air pallets	X	
Container pallets	X	X
Communication equipment	X	X
Access barriers and chains	X	X



**Figure G.10-1: Technical Area 54, Area G, Pad 9 Outdoor Container Storage Unit Grid Sampling and Additional Sampling Locations**



**Figure G.10-1: Technical Area 54, Area G, Pad 9 Outdoor Container Storage Unit Grid Sampling and Additional Sampling Locations**



**ATTACHMENT G.11**  
**TECHNICAL AREA 54, AREA G, PAD 10**  
**OUTDOOR CONTAINER STORAGE UNIT**  
**CLOSURE PLAN**



## 1.0 INTRODUCTION

This closure plan describes the activities necessary to close the outdoor hazardous waste container storage unit at Technical Area (TA)-54, Area G, Pad 10 at the Los Alamos National Laboratory (Facility), hereinafter referred to as the permitted unit. The information provided in this closure plan addresses the closure requirements specified in Permit Part 9 and the Code of Federal Regulations (CFR), Title 40, Part 264, Subparts G and I for hazardous waste management units 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 to the plan, and closure activity documentation associated with the closure will be on file with hazardous waste compliance personnel at the Facility and at the U.S. Department of Energy (DOE) Los Alamos Site Office. Prior to closure of the permitted unit, this closure plan may be amended in accordance with Permit Section 9.4.8, as necessary and appropriate, to provide updated sampling and analysis plans and to incorporate updated decontamination technologies. Amended closure plans shall be submitted to the New Mexico Environment Department (Department) for approval prior to implementing closure activities.

## 2.0 DESCRIPTION OF UNIT TO BE CLOSED

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

The permitted unit, which is an asphalt pad that measures 350 feet (ft) long and 250 ft wide (approximately 89,600 square ft), is located on the eastern end of Area G. The irregular-shaped, asphalt pad (Pad 10) is 4-6 inches (in.) thick and overlies approximately six inches of underlying base course and overlies about six inches of tuff fill. The permitted unit was constructed in 2003 and covers two previously existing pads (Pads 2 and 4). It is constructed with curbing on the north and partially the east sides and is sloped from approximately 1% to 1.5% to the east and south-east for drainage.

Transuranic waste characterization trailers are situated on the permitted unit and hazardous waste containers are stored near the trailers for staging associated with the waste characterization. Large portions of the permitted unit are also used for storage of feed stock empty drums for the transuranic waste characterization activities. Storage of oversized mixed wastes in transporters and metal boxes also occurs on the permitted unit. The current hazardous waste storage activities at the permitted unit include the following structures:

**TA54-0497, RTR2** - The Real-Time Radiography (RTR) system #2 is designed to provide X-ray examination of the contents of a waste drum. The unit has been located on Pad 10 in support of the DOE Carlsbad Central Characterization Project (CCP) operations.

**TA54-0498, LANL HENC** - The High-Efficiency Neutron Counter (HENC) is designed to provide a passive neutron and gamma measurement of transuranic waste in 55-gallon containers. The HENC supported the Transuranic Waste Characterization Project and Project 2010 and subsequently CCP operations from 2004 to the present.

**TA54-0506, MCS HENC** - The Canberra MCS HENC is functionally identical to the TA-54-0498 HENC and provides passive neutron and gamma assays of 55-gal waste drums.

**TA 54-0547, Super High Efficiency Neutron Coincidence (SuperHENC) counter** - Trailer TA-54-04570547 houses a high efficiency neutron counter designed to handle large waste containers. It is designed to provide a passive neutron and gamma measurement of large transuranic waste containers like standard waste boxes. The SuperHENC will support the Facility's Transuranic Waste Characterization Project and Central Characterization Project operations beginning in 2010.

**TA54-0545 and 546, Storage trailers** - Heated transportainers used for waste container storage and equilibration prior to characterization.

The above structures are used for non-destructive assay (NDA) techniques associated with the radioactive characterization for the Waste Isolation Pilot Plant certification of waste containers or in support of those activities. The characterization provided by the NDA monitoring techniques does not involve opening the waste containers. The other trailers and structures provide: 1) shelter for the radioassay equipment, 2) enclosed areas to stabilize the waste containers being assayed; and 3) external containment for the waste within the structures.

The following structures are situated on the permitted unit as support structures and according to the Facility Operating Record have never stored hazardous waste:

**TA54-0365, Office Building, Formerly MTGS** - TA54-0365 formerly housed the MTGS. The MTGS was a gamma assay system prototype developed by the Permittees. The instrument was salvaged in 2007 and the trailer was converted to office space.

**TA54-0483, Source Storage Trailer** - TA54-0483 serves as a storage area for calibration sources needed by the NDA systems.

**TA54-1059, Storage Trailer** - TA54-1059 has been used to store miscellaneous NDA equipment, such as container turn-tables and equipment stands.

The permitted unit has been used for the storage of mixed waste in solid form with small quantities of liquid form waste since 2004. The hazardous waste stored at the permitted unit has been: solidified inorganic solids; leached process residues; salts and cement paste; ash; dewatered aqueous sludge; chemical treatment sludge; soils; combustible debris (e.g., plastics, rubber, laboratory trash, building debris); and heterogeneous debris.

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

### 3.0 ESTIMATE OF MAXIMUM WASTE STORED

Approximately 800,000 gallons of hazardous waste has been stored at the permitted unit to date. Throughout the life of this Permit, it is estimated that an additional 1,375,000 gallons of hazardous waste will be stored at the permitted unit.



**ATTACHMENT G.12**  
**TECHNICAL AREA 54, AREA G, PAD 11**  
**OUTDOOR CONTAINER STORAGE UNIT**  
**CLOSURE PLAN**



## 1.0 INTRODUCTION

This closure plan describes the activities necessary to close the outdoor hazardous waste container storage unit at Technical Area (TA)-54, Area G, Pad 11 at the Los Alamos National Laboratory (Facility), hereinafter referred to as the permitted unit. The information provided in this closure plan addresses the closure requirements specified in Permit Part 9 and the Code of Federal Regulations (CFR), Title 40, Part 264, Subparts G and I for hazardous waste management units 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 to the plan, 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 the permitted unit and not discussed within the Permit are described below.

The permitted unit, which was constructed in 1998, is located in the western portion of Area G and consists of an asphalt pad that measures 478 feet long and 137 feet wide or approximately 65,500 square feet. It consists of four inches of asphalt built over underlying base course which overlies a minimum of six inches of tuff fill. It also has a dome (Dome 375) and a ~~High Energy Real Time Radiography transportainer (HERTR)~~ Real-Time Radiography (RTR) system #1 situated on it. Hazardous waste is stored only in the Dome 375.

The permitted unit is sloped from 1% to 2% to the south/southeast for drainage and has curbing on the south and east sides as well. Drainage is directed to a series of four 5 inch-wide by 27 foot-long drains, all connected to two underground 8-inch diameter polyvinyl chloride pipes which discharge to a concrete lined ditch located near the southeast corner of the pad.

The permitted unit stores hazardous waste in both liquid and solid form in Dome 375. The dome, which is an aluminum framework of trusses covered with tension-fitted ultraviolet resistant, fire-retardant coated, polyester fabric, is 300 feet long by 100 feet wide and covers a surface area of approximately 30,000 square feet. It is anchored with anchor bolts to the interior concrete ring wall and is equipped with two double-panel rolling doors, one at the east end of the dome and the other on the west end. It also has 14 personnel doors located approximately every 31 to 57 feet along the dome's length. These doors allow for adequate access both by vehicles and by personnel. The interior perimeter of the dome is surrounded by a concrete ring wall, which helps prevent run-on into and runoff from the dome. Asphalt ramps located at the vehicle entrances allow vehicles and container handling equipment to pass safely over the curb. Dome 375 contains a modular panel containment structure (approximately 120 feet long x 60 feet wide) used for size reduction, decontamination, segregation, waste assay, reclassification activities, and repackaging of transuranic waste prior to shipment offsite.

~~The High Energy Real Time Radiography (HERTR) transportainer, which sits on a concrete pad, is located on the eastern portion of Pad 11 and has an approximate footprint of 50 feet by 50 feet. It consists of two structures, a portable control room and a re-locatable X-ray vault constructed of modular concrete walls and blocks for shielding. Containers to be examined are loaded on the west side of the structure.~~The

RTR1 is designed to provide X-ray examination of the contents of a waste drum. The unit, RTR1, has been located on Pad 11 in support of the transuranic waste characterization operations.

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

### **3.0 ESTIMATE OF MAXIMUM WASTE STORED**

To date, no hazardous waste has been stored at the permitted unit. The estimated volume for the maximum inventory of waste managed over the projected lifespan of the permitted unit is 1,501,000 gallons.

### **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.

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

### 5.2.1 Records Review

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

- a. confirm the specific hazardous waste constituents of concern; and
- b. confirm additional sampling locations (e.g., locations of any 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~~ inspection of the floors, walls, and ceilings of the RTR1 and the modular containment structure, as well as inspecting the asphalt pad 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 Equipment and Structures

In accordance with procedures in Permit Section 9.4.3, all remaining hazardous waste residues and hazardous constituents will be removed from the permitted unit. The permitted unit's structures and related equipment will be decontaminated, removed, or both and managed appropriately. All waste material will be controlled, handled, characterized, and disposed of in accordance with Permit Attachment C (*Waste Analysis Plan*) 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 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 disposed of in accordance with Permit Section 9.4.5 and Section 7.0 of this closure plan.

The modular containment structure and the tensioned-fabric membranes on the dome structure, the aluminum beams, trusses, and ancillary equipment supporting the dome will be removed before the assessment. The asphalt pad, the materials associated with the asphalt pad (curbing and ramps), and a minimum of six inches of the base course and soil underlying the asphalt pad will be removed after the assessment. If after the removal of the pad (and underlying soil and base course material) the remaining surface shows evidence that the removal to that point has not gathered all appropriate soils and materials associated with the pad, additional soil and materials will be removed. If it is determined to be appropriate at the time of the assessment, soil samples may be collected through the asphalt (before the pad and its materials have been removed) from areas where contamination is suspected (i.e., locations of stains or known spills).

In the event that alternative closure requirements, in accordance Permit Section 9.2.2.2, are applied to the closure of this permitted unit, the Permittees shall take precautions to not remove or disturb the soil or tuff that overlies the regulated unit (covered under the March 1, 2005 Compliance Order on Consent (Order) (see Permit Section 9.3)) beneath the permitted unit.

### 5.3.2 Decontamination of Structures and Related Equipment

The ~~HERTRTRI~~1, as well as equipment and operating machinery that is not sensitive to water intrusion, such as the equipment cabinets, will be decontaminated by steam cleaning using water or pressure washing with a solution consisting of a surfactant detergent (*e.g.*, Alconox®) and water. Other equipment that is sensitive to water intrusion such as the portable air monitors, electronic devices and tools, and spill cleanup equipment containers in the dome, will be cleaned with a wipe-down wash with a solution consisting of a surfactant detergent (*e.g.*, Alconox®) and water. Table G.12-8 in this closure plan lists the equipment needing decontamination. This list will be revised during the review and assessment as necessary.

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

### 5.4 Equipment Used During Decontamination Activities

Reusable protective clothing, tools, and equipment used during closure activities will be cleaned with a wash water solution. Residue, disposable equipment, and equipment that cannot be decontaminated will be containerized and managed as waste as summarized in Table G.12-3 and in accordance with Permit Section 9.4.5 and Section 7.0 of this closure plan.

## 6.0 SAMPLING AND ANALYSIS PLAN

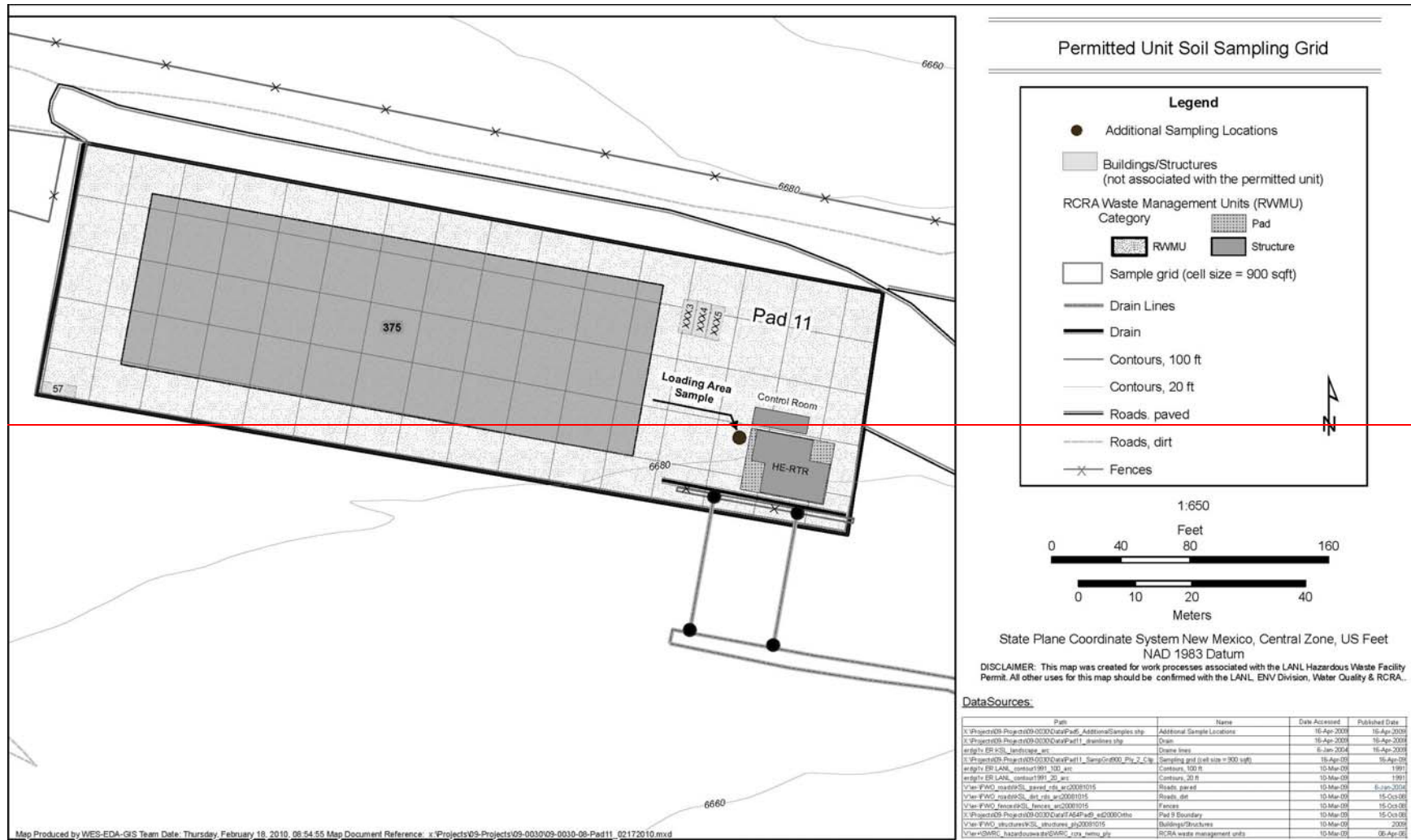
This SAP addresses the specific closure sampling and analysis requirements in Permit Section 9.4.7 and describes the sampling, analysis, and quality assurance and quality control (QA/QC) methods that will be used to demonstrate that the Permittees have met the closure performance standards outlined in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

### 6.1 Soil Sampling and Decontamination Verification Sampling Activities

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

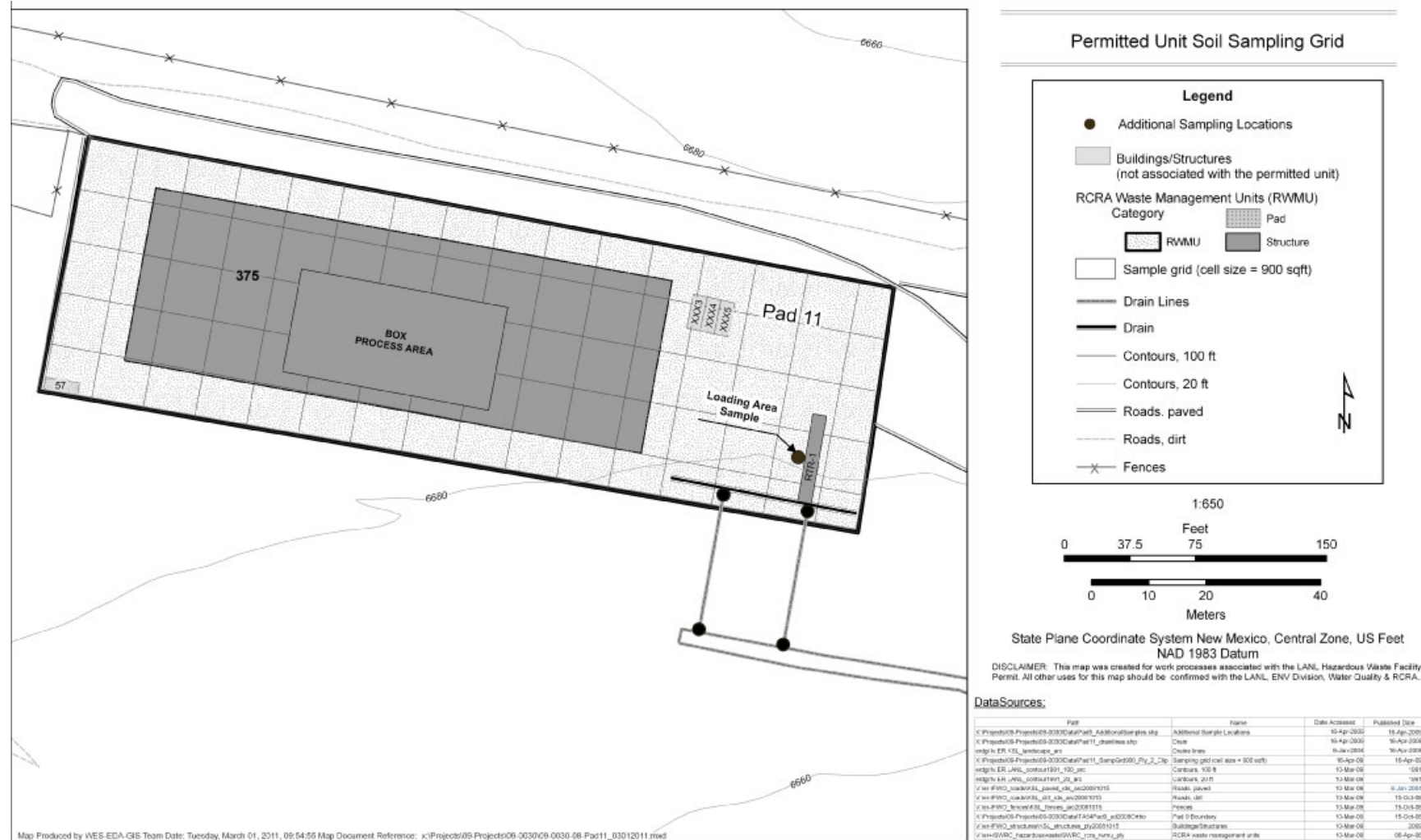
One wipe sample will be collected from each piece of decontaminated equipment related to the permitted unit. In compliance with Permit Section 9.4.7.1.ii, this closure plan will ensure the collection of soil samples from the following locations:

- a. one sample at the loading zone area (*see* Permit Section 9.4.7.1.ii(1));
- b. one sample every 900 square feet of the permitted unit for a total of 80 samples (*see* Permit Section 9.4.7.1.ii(2));
- c. one sample at the discharge points (in the concrete-lined ditch) of the two 80 foot long underground pipes that collect run-off at Pad 11 for a total of four samples (*see* Permit Section 9.4.7.1.ii(4)); and





**Figure G.12-1: Technical Area 54, Area G, Pad 11 Outdoor Container Storage Unit Grid Sampling and Additional Sampling Locations**



**Figure G.12-1: Technical Area 54, Area G, Pad 11 Outdoor Container Storage Unit Grid Sampling and Additional Sampling Locations**



**ATTACHMENT J**  
**HAZARDOUS WASTE MANAGEMENT UNITS**



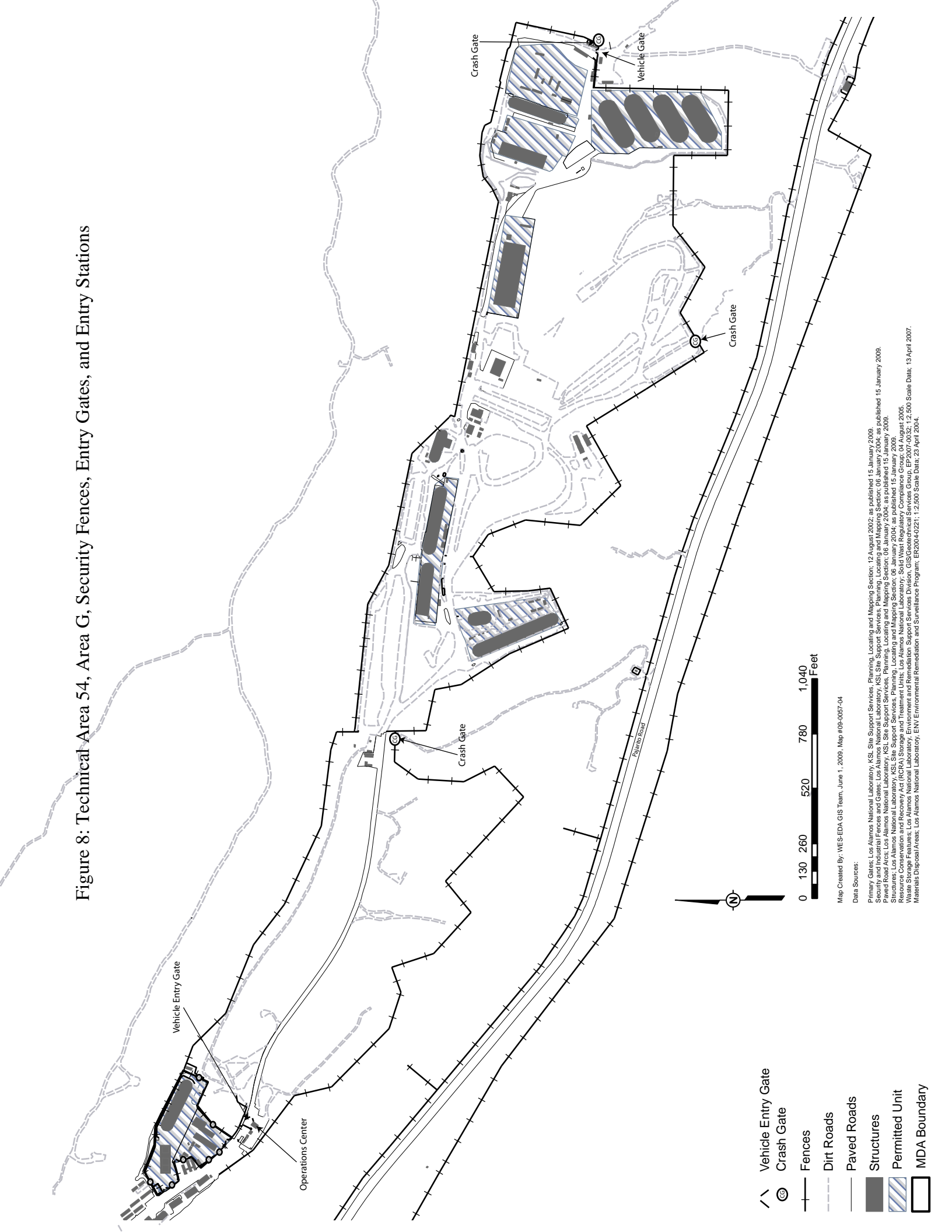
Unit Identifier	Process Codes	Operating Capacity	General Information	Type of Unit
TA-16-399 X01*			Burn Tray Total square footage - 64 Interim Status Unit not authorized to treat hazardous waste and undergoing closure	Outdoor (associated with an open burn unit)
TA-36-8 X01**		2000 lbs/ detonation	Near Structure TA-36-8 Interim Status Unit	NA
TA-39-6 X01**		1000 lbs/ detonation	Near Structure TA-39-6 Interim Status Unit	NA
TA-39-57 X01**		1000 lbs/ detonation	Near Structure TA-39-57 Interim Status Unit	NA
TA-50-69 Indoor	S01	1,500 gal	Includes Rooms 102 and 103. Total square footage – 2,680	Indoor
TA-50-69 Outdoor Pad	S01	30,000 gal	Total square footage – 3,240	Outdoor (not associated with a regulated unit)
TA-54 “G”	D80	NA	Material Disposal Area Unit not permitted to receive hazardous waste	Regulated unit
TA-54 Area G Container Storage Unit (below ground)	S99	4,950 gal	Includes shafts 145 and 146 Wastes removed and unit undergoing closure, closure certification incomplete	NA
TA-54 Area G Pad 1	S01	502,920 gal	Includes building TA-54-412 (DVRS) <del>and MOVER and support trailer</del> Total square footage – 89,500	Outdoor (associated with a regulated unit)
TA-54 Area G Pad 3	S01	213,840 gal	Includes Storage Dome 48 Total square footage – 19,300	Outdoor (associated with a regulated unit)

Unit Identifier	Process Codes	Operating Capacity	General Information	Type of Unit
TA-54 Area G Pad 5	S01	623,480 gal	Includes Storage Domes 49 and 224; Storage Sheds 144, 145, 146, 177, 1027, 1028, 1030, and 1041  Pad 5 is a consolidation of former Pads 5, 7, and 8.  Total square footage – 59,900	Outdoor (associated with a regulated unit)
TA-54 Area G Pad 6	S01	597,300 gal	Includes Storage Domes 153 and 283; Transportainer 491; and Storage Sheds 486, 522, 523, and 492.  Total square footage – 68,300	Outdoor (associated with an regulated unit)
TA-54 Area G Pad 9	S01	1,446,720 gal	Includes Storage Domes 229, 230, 231, and 232; <del>Transportainer 362;</del> and Storage Sheds 57 and 484.  Total square footage – 158,000	Outdoor (associated with a regulated unit)
TA-54 Area G Pad 10	S01	159,770 gal	Includes Transuranic (TRU) Waste Characterization Facilities: TA-54-0547 (SuperHENC), TA-54-0497 (RTR2), TA-54-0498 (LANL HENC), TA-54-0506 (MCS HENC), TA-54-0545 and 546 (Storage trailers), TA-54-0365 (Office Building Formerly MTGS), TA-54-0483 (Source Storage Trailer), and TA-54-1059 (Storage Trailer)  Pad 10 is a consolidation of former Pads 2 and 4.  Total square footage – 120,000	Outdoor (associated with a regulated unit)
TA-54 Area G Pad 11	S01	682,440 gal	Includes Storage Dome 375 and <del>RTR1</del> <del>HERTR</del>	Outdoor (associated with a regulated unit)

## **Attachment N Figure Modifications**



Figure 8: Technical Area 54, Area G, Security Fences, Entry Gates, and Entry Stations







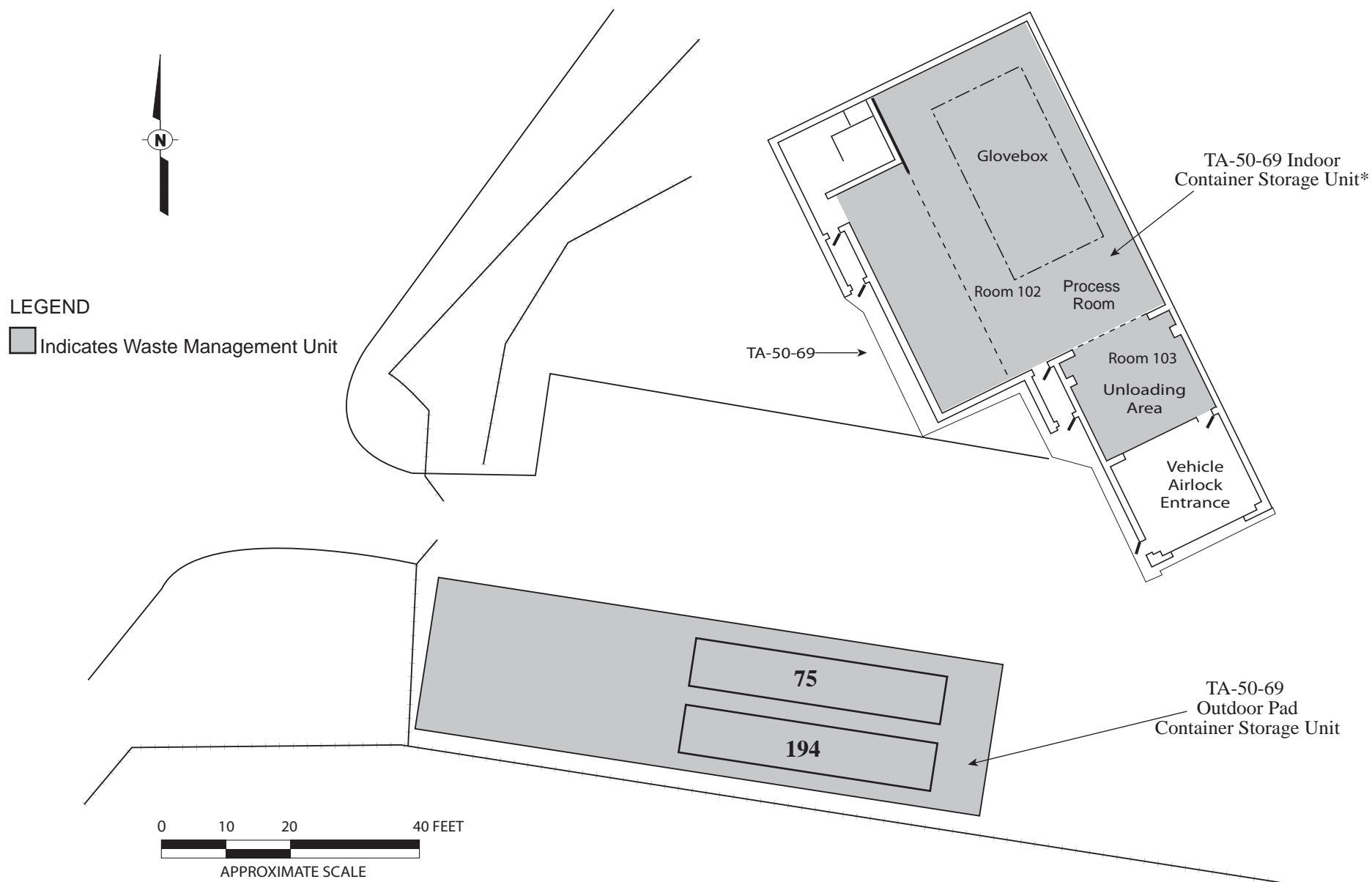


Figure 23  
Technical Area (TA) 50, Building 69, Indoor and Outdoor Container Storage Units



\* To be closed in accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1, Subpart VI [10-01-03], requirements.

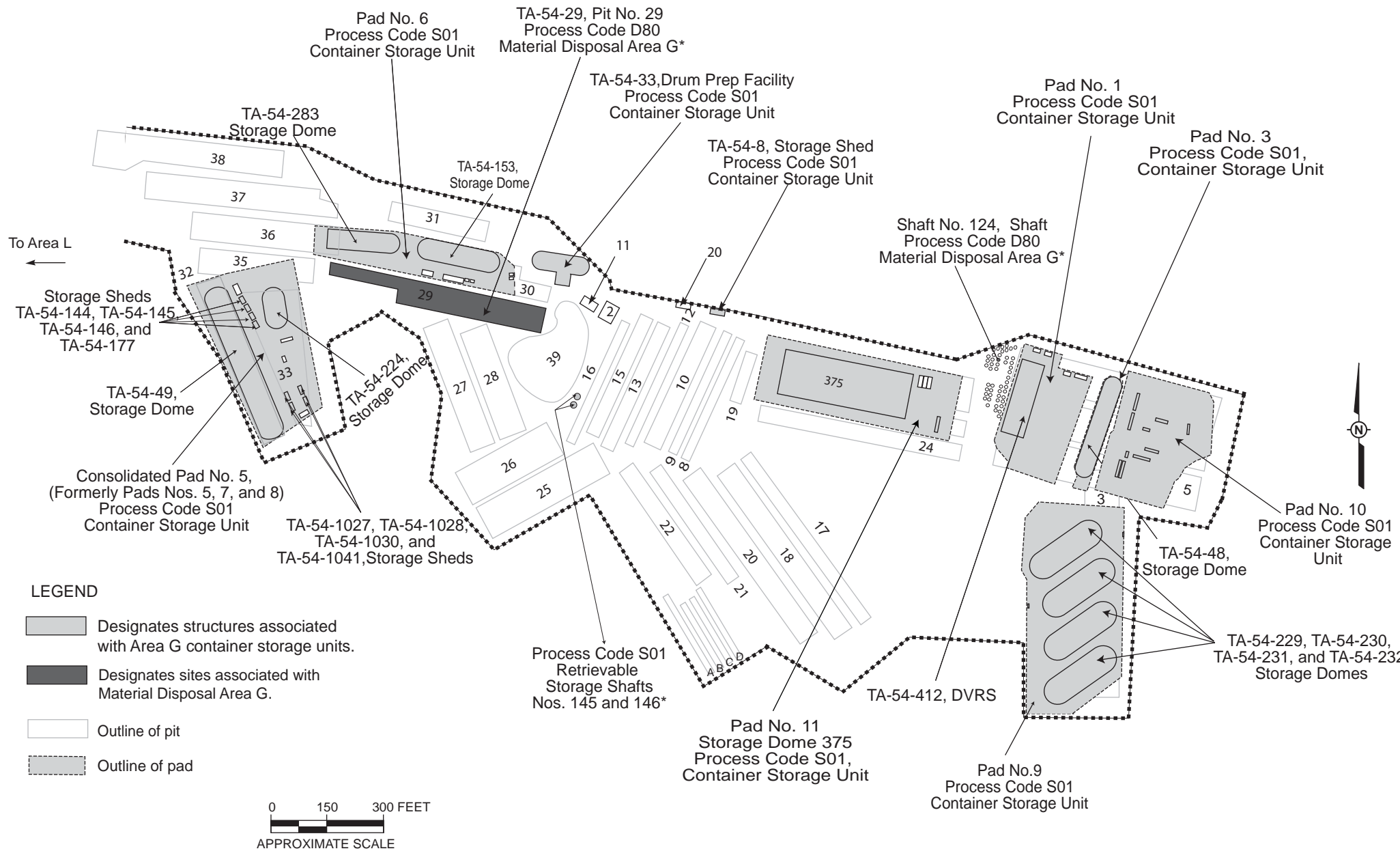
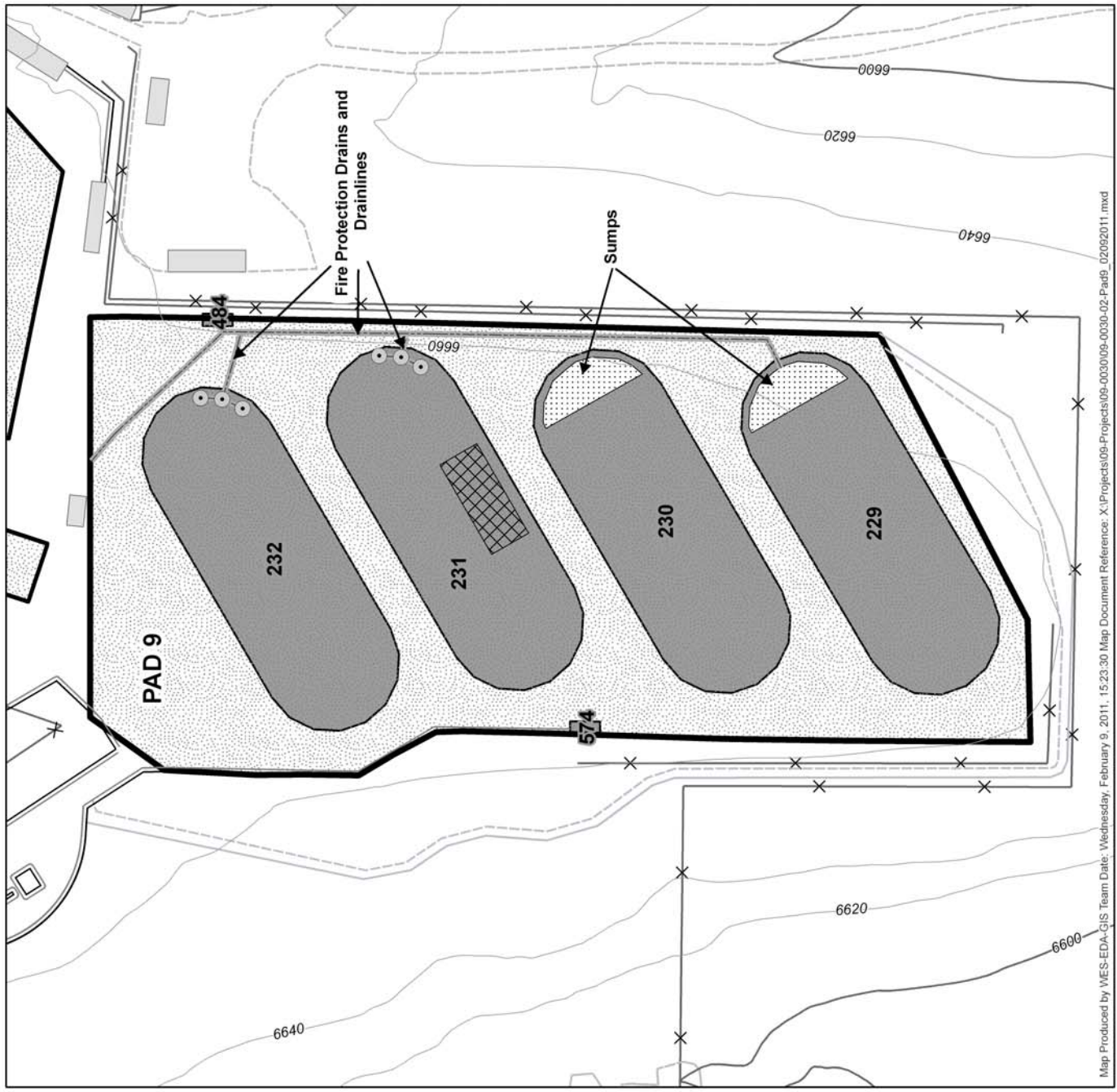


Figure 27: Technical Area 54, Area G, Container Storage Units





**Legend**

- Drains
- Sumps
- Perma-Con
- Buildings/Structures (not associated with the permitted unit)
- RCRA Waste Management Units (RWMU)

**Category**

- RWMU
- Structure
- Sample grid (cell size = 900 sqft)
- Fire Protection Drain Lines
- Contours, 100 ft
- Contours, 20 ft
- Roads, paved
- Roads, dirt
- Fences

1:1,000

Feet

0 50 100 200

Meters

0 15 30 60

State Plane Coordinate System New Mexico, Central Zone, US Feet  
NAD 1983 Datum

DISCLAIMER: This map was created for work processes associated with the LANL Hazardous Waste Facility Permit. All other uses for this map should be confirmed with the LANL ENV Division, Water Quality & RCRA...

**DataSources:**

Path	Name	Date Accessed	Published Date
erig1\1\ER_KSL_water_perifileselection\PCOIN	Fire Department Connection	9-Apr-09	15-Jan-09
X:\Projects\09-Projects\09-0030\02\Pad9\Drains.shp	Drains	9-Apr-09	9-Apr-09
X:\Projects\09-Projects\09-0030\02\Pad9\Sumps.shp	Sumps	9-Apr-09	9-Apr-09
erig1\1\ER_KSL_water_perifileselection\FF	Fire Protection Drain Lines	9-Apr-09	15-Jan-09
X:\Projects\09-Projects\09-0030\02\Pad9\Perma-Con_Poly.shp	Perma-Con	9-Apr-09	9-Apr-09
X:\Projects\09-Projects\09-0030\02\Pad9\KSL_landscapes_ar\20081015	KSL_landscapes_ar\20081015	17-Mar-09	17-Mar-09
V:\er-PWD_landscapes\KSL_landscapes_ar\20081015	Contours, 100 ft	10-Mar-09	15-Oct-08
erig1\1\ER_LANL_contour100_arc	Contours, 20 ft	10-Mar-09	1991
V:\er-PWD_landscapes\KSL_landscapes_ar\20081015	Roads, paved	10-Mar-09	15-Oct-08
V:\er-PWD_landscapes\KSL_landscapes_ar\20081015	Roads, dirt	10-Mar-09	15-Oct-08
V:\er-PWD_landscapes\KSL_landscapes_ar\20081015	Fences	10-Mar-09	15-Oct-08
X:\Projects\09-Projects\09-0030\02\Pad9\Pad9Boundary	Pad 9 Boundary	10-Mar-09	04-Aug-05
V:\er-PWD_structures\KSL_structures\20081015	Buildings/Structures	10-Mar-09	04-Aug-05
V:\er-SWRC_hazardouswaste\SWRC_cra_rumu_ply	RCRA waste management units	10-Mar-09	06-Apr-08

Figure 28: Technical Area (TA)-54 Area G, Pad 9, (TWISP Domes 229, 230, 231 & 232)















### CERTIFICATION

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



**James C. Cantwell**  
Associate Director  
Associate Directorate Environment, Safety, Health, & Quality  
Los Alamos National Laboratory  
Operator



Date Signed



**Kevin W. Smith**  
Manager, Los Alamos Site Office  
National Nuclear Security Administration  
U.S. Department of Energy  
Owner/Operator



Date Signed





DEPARTMENT OF ENERGY  
National Nuclear Security Administration  
Los Alamos Site Office  
Los Alamos, New Mexico 87544



MAR 16 2011

Mr. John Kieling  
Manager  
RCRA Permits Management Program  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505-6303

COPY



Dear Mr. Kieling:

Subject: Transmittal of Request for Class 1 Permit Modifications to the Los Alamos National Laboratory Hazardous Waste Facility Permit, EPA ID No. NM0890010515

The purpose of this letter is to request review and approval of eleven (11) Class 1 permit modifications to the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (Permit) issued to the Department of Energy and Los Alamos National Security, LLC (DOE/LANS) on November 2010. The modifications revise the emergency equipment lists, clarify permit conditions and inspection activities, add and remove structures from permitted units, and revise figures and text associate with these clarifications, additions, and removals.

The proposed modifications have been prepared in accordance with the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (20.4.1.900 NMAC) (incorporating Code of Federal Regulations [CFR], Title 40 § 270.42(a) and (d)), revised March 1, 2009. The permit modifications are Class 1 modifications or Class 1 modifications requiring prior approval by the

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"><li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li><li>Print your name and address on the reverse so that we can return the card to you.</li><li>Attach this card to the back of the mailpiece, or on the front if space permits.</li></ul>		<p>A. Signature <input checked="" type="checkbox"/> <u>Pamela Allen</u> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) <u>Pamela Allen</u></p> <p>C. Date of Delivery <u>3/17/11</u></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>	
1. Article Addressed to:  Mr. John E. Kieling Hazardous Waste Bureau New Mexico Environment Department 2905 Rodeo Park Drive East, Building 1 Santa Fe, NM 87505		3. Service Type <u>HAND CARRIED</u> <input type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.	
2. Article Number (Transfer from service label)		4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

figures used to create the naracopy.

on request classes has been  
mittal. In some cases, the Class  
structure numbers on figures  
e structures that are used for  
e Permit. The changes are  
ste managed, technological  
move emergency equipment  
CFR §270.42(d).

etter, the enclosed permit  
the Permit (collectively LA-  
ge in sections of the Permit  
ons to figures and descriptive  
of this submittal. The  
s have been changed rather than  
py contains a reproduction of  
e word processing files and