PERMIT ATTACHMENT L  FIGURES
(for Attachment G and Attachment M figures, see Attachments G and M)

Figure 1:  Regional Location Map of Sandia National Laboratories
Figure 2:  Technical Areas and Permitted Hazardous and Mixed Waste Management Units at the Facility
Figure 3:  Location of the Hazardous Waste Handling Unit at the Facility
Figure 4:  Hazardous Waste Handling Unit, Hazardous and Mixed Unit Waste Management Areas
Figure 5:  Hazardous Waste Handling Unit Building 959 Floor Plan
Figure 6:  Hazardous Waste Handling Unit Building 958 Floor Plan
Figure 7:  Hazardous Waste Handling Unit Access Control Features and Loading/Unloading Areas
Figure 8:  Hazardous Waste Handling Unit Drainage Control Features
Figure 9:  Location of the Thermal Treatment Unit at the Facility
Figure 10: Thermal Treatment Unit (TTU) Hazardous Waste Management Area
Figure 11: Thermal Treatment Unit Loading/Unloading Area
Figure 12: Thermal Treatment Unit Drainage Control Features
Figure 13: Thermal Treatment Unit Access Control Features
Figure 14: Thermal Treatment Unit Plan View with Dimensions
Figure 15: Location of the Radioactive and Mixed Waste Management Unit (RMWMU) at the Facility
Figure 16: Radioactive and Mixed Waste Management Unit Hazardous and Mixed Waste Management Areas
Figure 17: Radioactive and Mixed Waste Management Unit Building 6920 Hazardous and Mixed Waste Management Areas
Figure 18: Radioactive and Mixed Waste Management Unit Building 6921 Hazardous and Mixed Waste Management Areas
Figure 19-A: Radioactive and Mixed Waste Management Unit, Buildings 6925 and 6926, Hazardous and Mixed Waste Management Areas
Figure 19-B: Radioactive and Mixed Waste Management Unit, Loading/Unloading and Access Control Features
Figure 19-C: Radioactive and Mixed Waste Management Unit, Drainage Control Features
Figure 20: Radioactive and Mixed Waste Management Unit Thermal Deactivation Device, Exterior Bottom View
Figure 21-A: Location of the Auxiliary Hot Cell Unit at the Facility
Figure 21-B: Location of the Auxiliary Hot Cell Unit (AHCU) in Technical Area (TA) V
Figure 22: Auxiliary Hot Cell Unit, Hazardous and Mixed Waste Management Areas
Figure 23: Auxiliary Hot Cell Unit Loading/Unloading and Access Control Features
Figure 24: Auxiliary Hot Cell Unit (AHCU), Drainage Control Features
Figure 25: Location of the Manzano Storage Bunkers at the Facility
Figure 26: Location of the Manzano Storage Bunkers at Manzano Base
Figure 27: Views, Manzano Storage Bunker, Type B, Bunker 37034
Figure 28: Views, Manzano Storage Bunker, Type C, Bunker 37118
Figure 29: Views, Manzano Storage Bunkers, Type D, Bunkers 37045, 37055, and 37057
Figure 30: Manzano Storage Bunkers, Drainage Control Features
Figure 31: Location of the Corrective Action Management Unit (CAMU) at the Facility
Figure 32: Post-Closure Perimeter, Corrective Action Management Unit (CAMU)
Figure 33: Corrective Action Management Unit Containment Cell Site Plan
Figure 34: Corrective Action Management Unit, North-South Cross-Section of Leachate Collection and Removal System Sump C
Figure 35: Corrective Action Management Unit, East-West Cross-Section of Containment Cell
Figure 36: Plan View of Completed Corrective Action Management Unit (CAMU) Containment Cell Showing Final Cover Configuration and Associated Perimeter Drainage Pathways
Figure 37: Schematic Cross-Section of the Final Cover System, Corrective Action Management Unit Containment Cell
Figure 38: Plan View of Corrective Action Management Unit Containment Cell and Vadose Zone Monitoring System
Figure 39: Block Diagram of the Corrective Action Management Unit Containment Cell and Vadose Zone Monitoring System
Figure 40: Cross-Section View of Corrective Action Management Unit Containment Cell and Primary Subliner Monitoring System
Figure 41: Configuration of Vertical Sensor Array Monitoring Subsystem
Figure 42: Cross-Section Configuration of Chemical Waste Landfill and Sanitary Sewer Monitoring Subsystem
Figure 43: Hazardous Waste Handling Unit Evacuation Routes
Figure 44: Hazardous Waste Handling Unit Emergency Response and Access Information
Figure 45: Thermal Treatment Unit (TTU) Evacuation Route
Figure 46: Radioactive and Mixed Waste Management Unit, Evacuation Routes
Figure 47: Radioactive and Mixed Waste Management Unit, Emergency Response and Access Information
Figure 48: Auxiliary Hot Cell Unit (AHCU), Evacuation Routes
Figure 49: Auxiliary Hot Cell Unit (AHCU), Emergency Response and Access Information
Figure 50: Manzano Storage Bunkers, Evacuation Routes
Figure 51: Local Area Map of Corrective Action Management Unit Containment Cell Evacuation Routes
Figure 52: Solid Waste Management Units and Areas of Concern Sandia National Laboratories Albuquerque, New Mexico
Appendices with Figures

Appendix A-1: Photographs of the Hazardous and Mixed Waste Management Areas at the HWHU
Appendix A-2: Photographs of the Hazardous Waste Management Areas at the TTU
Appendix A-3: Photographs of the Hazardous and Mixed Waste Management Areas at the RMWMU
Appendix A-4: Photographs of the Hazardous and Mixed Waste Management Areas at the AHCU
Appendix A-5: Photographs of the Hazardous and Mixed Waste Management Areas at the MSB
Figure 2
Technical Areas and Permitted Hazardous and Mixed Waste Management Units at the Facility
Figure 3
Location of the Hazardous Waste Handling Unit at the Facility
Figure 4
Hazardous Waste Handling Unit, Hazardous and Mixed Waste Management Areas
Figure 5
Hazardous Waste Handling Unit Building 959 Floor Plan
Figure 6
Hazardous Waste Handling Unit Building 958 Floor Plan
Figure 7
Hazardous Waste Handling Unit Access Control Features and Loading/Unloading Areas
Figure 8
Hazardous Waste Handling Unit Drainage Control Features
Figure 9
Location of the Thermal Treatment Unit at the Facility
Legend
- Earthen Berm
- Road / Parking
- Fence
- Building / Structure
- Hazardous Waste Management Area
- Loading / Unloading Area

Note: TTU gates and Bldg. 6715 are locked when personnel are not present.

Figure 11
Thermal Treatment Unit Loading/Unloading Area
Figure 13
Thermal Treatment Unit Access Control Features
Figure 15
Location of the Radioactive and Mixed Waste Management Unit (RMWMU) at the Facility
Figure 16
Radioactive and Mixed Waste Management Unit
Hazardous and Mixed Waste Management Areas
Figure 18
Radioactive and Mixed Waste Management Unit,
Building 6921, Hazardous and Mixed Waste Management Areas
Figure 19-A
Radioactive and Mixed Waste Management Unit, Buildings 6925 and 6926, Hazardous and Mixed Waste Management Areas
Figure 19-B
Radioactive and Mixed Waste Management Unit,
Loading/Unloading and Access Control Features
Figure 19-C
Radioactive and Mixed Waste Management Unit, Drainage Control Features
Figure 20
Radioactive and Mixed Waste Management Unit
Thermal Deactivation Device, Exterior Bottom View

Overall length: 19.6"
height: 14.25"
width: 11"
Figure 22
Auxiliary Hot Cell Unit, Hazardous and Mixed Waste Management Areas
Figure 23
Auxiliary Hot Cell Unit Loading/Unloading and Access Control Features
Figure 25
Location of the Manzano Storage Bunkers at the Facility
Figure 26
Location of the Manzano Storage Bunkers at Manzano Base
Figure 27
Views, Manzano Storage Bunker, Type B, Bunker 37034
Figure 28
Views, Manzano Storage Bunker, Type C, Bunker 37118
Figure 29
Views, Manzano Storage Bunkers, Type D Bunkers 37045, 37055, and 37057
Figure 31
Location of the Corrective Action Management Unit (CAMU) at the Facility
Figure 32
Post-Closure Perimeter
Corrective Action Management Unit (CAMU)
Figure 33
Corrective Action Management Unit
Containment Cell Site Plan
Figure 34
Corrective Action Management Unit
North-South Cross-Section of Leachate Collection and Removal System Sump
Figure 35
Corrective Action Management Unit
West-East Cross-Section of Containment Cell
Figure 36
Plan View of Completed Corrective Action Management Unit (CAMU) Containment Cell Showing Final Cover Configuration and Associated Perimeter Drainage Pathways
Figure 37
Schematic Cross-Section of Final Cover System, Corrective Action Management Unit Containment Cell
Figure 38
Plan View of Corrective Action Management Unit Containment Cell and Vadose Zone Monitoring System
Figure 40
Cross-Section View of Corrective Action Management Unit Containment Cell and Primary Subliner Monitoring Subsystem
Figure 42
Cross-Section Configuration of Chemical Waste Landfill and Sanitary Sewer Monitoring Subsystem
Figure 43
Hazardous Waste Handling Unit Evacuation Routes
Figure 44
Hazardous Waste Handling Unit Emergency Response and Access Information
Figure 45
Thermal Treatment Unit (TTU)
Evacuation Route

Legend

- Earthen Berm
- Road / Parking
- Fence
- Evacuation Route
- Building / Structure
- Hazardous Waste Management Area
- Steps

Assembly Area
Fire Hydrant

Note: TTU gates and Bldg. 6715 are locked when personnel are not present.
Figure 47
Radioactive and Mixed Waste Management Unit, Emergency Response and Access Information
Figure 48
Auxiliary Hot Cell Unit (AHCU), Evacuation Routes
Figure 49
Auxiliary Hot Cell Unit (AHCU), Emergency Response and Access Information
Figure 51
Local Area Map of Corrective Action Management Unit
Containment Cell Evacuation Routes
Appendix A-1: Photographs of the Hazardous and Mixed Waste Management Areas at the HWHU
Hazardous Waste Handling Unit, Buildings 958 and 959
Photograph Taken on January 3, 2002
Process Code: S01

Building 958 is on the left, and Building 959 is on the right.
Hazardous Waste Handling Unit, Flammable Waste Storage Bay in Building 958
Photograph Taken on January 3, 2002
Process Code: S01
Hazardous Waste Handling Unit, Waste Storage Bays in Building 959
Photograph Taken on January 3, 2002
Process Code: S01

The drum at the far end of the building near the door contains absorbent for spill control. The bucket on the wall above it contains clean up materials.

Containers of hazardous and mixed wastes (solids and liquids) are segregated into the bays by compatibility and are stored on shelves over secondary containment in the bay.
Hazardous Waste Handling Unit,
Modular Storage Buildings (958B and 958C)
Photograph Taken on January 3, 2002
Process Code: S01
Appendix A-2: Photographs of the Hazardous Waste Management Areas at the TTU
The sheet metal housing and propane lines for the propane burners are on the left side of the burn cage. The sheets of steel on the right side and the back of the burn cage are attached at the top and provide protection from wind during waste treatment.

The entire surface of the concrete foundation pad and the inside edge of the concrete pad curb are lined with steel. Runoff water is directed toward the right front corner of the pad, through a filter, and into a covered catchment tank that is visible at the lower right corner of the photograph.

The burn pan lid is in the lowered position. The burn cage is surrounded by an earthen berm. The gate in the fence surrounding the TTU is open.
The door of the burn cage is open on the left (front) side of the cage. The sheet metal housing for the propane burners is visible on the far side of the burn cage.
The base of the burn pan sits on the steel beams that run across in the front and back of the burn cage. The pan is 6 inches deep. The lid is lowered and covers the pan. During operation, the lid is raised using the attached cable, and hazardous wastes are placed inside the burn pan or liquid wastes are pumped into the pan. The liquid waste feed system is located on the right side of the cage and is not visible in this photograph. It is temporarily out of service.

The burn cage door is open. The steel sheets on the outside of the burn cage provide protection from wind during treatment. The sheet metal housing for the propane burners is visible to the left of the burn cage.
Appendix A-3: Photographs of the Hazardous and Mixed Waste Management Areas at the RMWMU
Radioactive and Mixed Waste Management Unit, East Side of Building 6920
Photograph Taken on December 5, 2001
Process Codes: S01, T04
Radioactive and Mixed Waste Management Unit, West Side of Building 6920
Photograph Taken on December 5, 2001
Process Codes: S01, T04
Radioactive and Mixed Waste Management Unit, Building 6920, South Bay
Photograph Taken on December 20, 2001
Process Codes: S01, T04

The south bay is used for storage of hazardous and mixed wastes in containers and for treatment. The doors to three of the four rooms in the south bay are visible at the left edge of the picture. Treatment operations typically occur in these rooms. The roll-up door at the far (east) end of the room leads to an additional storage/work area. A secondary containment sump is shown on the right in the photograph.
Radioactive and Mixed Waste Management Unit, Building 6921
Photograph Taken on December 5, 2001
Process Codes: S01, T04
Radioactive and Mixed Waste Management Unit, Building 6925
Photograph Taken on December 5, 2001
Process Codes: S01, T04
Radioactive and Mixed Waste Management Unit, Building 6925, Interior
Photograph Taken on December 20, 2001
Process Codes: S01, T04

The drum in the front of the row on the right contains liquid mixed waste and is stored on a portable spill containment pallet.
Radioactive and Mixed Waste Management Unit, Building 6926
Photograph Taken on December 5, 2001
Process Codes: S01
Radioactive and Mixed Waste Management Unit, Modular Storage Buildings

Photograph Taken on December 5, 2001

Process Code: S01
The work area and permanent shield wall are visible inside the building.
Appendix A-4: Photographs of the Hazardous and Mixed Waste Management Areas at the AHCU
Auxiliary Hot Cell Unit, Work Area North of Auxiliary Hot Cell
Photograph Taken on January 7, 2002
Process Codes: S01, T04

The permanent shield wall is visible inside the building at the right edge of the opening. The manipulator arms extend from the permanent shield wall into the work area. The north wall of the hot cell is visible behind the manipulator arms at the center of the picture. The fume hood is visible at the left edge of the work area.
Auxiliary Hot Cell Unit, Fume Hood and Work Area North of Auxiliary Hot Cell
Photograph Taken on January 7, 2002
Process Codes: S01, T04

One of the manipulator arms is visible. It extends from the permanent shield wall into the work area. The operator controls for the manipulator arms are on the right side (outside) of the permanent shield wall at the right edge of the picture. The fume hood is visible at the left edge of the picture. Covers of two storage silos are visible on the floor of the work area under the manipulator arm.
Auxiliary Hot Cell Unit, Operator Controls for Work Area and Hot Cell
Photograph Taken on January 7, 2002
Process Codes: S01, T04

The permanent shield wall is on the left, and the hot cell is located on the right. The operator controls for the manipulator arms in the permanent shield wall are visible on the left. The fume hood at the back of the work area is visible through the shield wall window. Similar operator controls and a window are located on the hot cell wall to the right.
Appendix A-5: Photographs of the Hazardous and Mixed Waste Management Areas at the MSB
Manzano Storage Bunkers, Type B, Front View of Bunker 37034
Photograph Taken on December 13, 2001
Process Code: S01

The drain shown near the right edge of the picture serves a drain tile on the outside of the bunker, allowing drainage of water (from precipitation) that may accumulate in the soil behind the concrete wall.

The large orange sign indicates that explosive (D003) waste is currently stored in this bunker. A fire extinguisher is located in the white box below and to the left of the orange sign.

The concrete pad in front of the bunker doors is level or slopes slightly away from the bunker, preventing surface water runoff into the bunker.
Manzano Storage Bunkers, Type D, Front View of Bunker 37045
Photograph Taken on December 13, 2001
Process Code: S01
Manzano Storage Bunkers, Type D, Front View of Bunker 37055
Photograph Taken on December 5, 2001
Process Code: S01
Manzano Storage Bunkers, Type D, Front View of Bunker 37057
Photograph Taken on December 5, 2001
Process Code: S01
Manzano Storage Bunkers, Type C, Front View of Bunker 37118
Photograph Taken on December 13, 2001
Process Code: S01