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Date: **MAR 11 2016**
Symbol: EPC-DO-16-055
LA-UR: 16-21335
Locates Action No.: N/A

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

RECEIVED

Dear Mr. Kieling:

**NMED
Hazardous Waste Bureau**

**Subject: Notification of Class 1 Permit Modification Construction Updates for the Technical Area
63 Transuranic Waste Facility Container Storage Unit, Los Alamos National Laboratory
Hazardous Waste Facility Permit, EPA ID # NM0890010515**

The purpose of this letter is to notify the New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB) of a Class 1 permit modification to the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (the Permit) for the Technical Area (TA)-63 Transuranic Waste Facility (TWF) container storage unit. The Permit was issued to the Department of Energy (DOE) and Los Alamos National Security, LLC (LANS), the Permittees, in November 2010.

On December 19, 2013, NMED-HWB approved the addition of the TA-63 TWF storage unit to the Permit. In July 2014, a Class 1 permit modification notification was also submitted to NMED to cover design changes that occurred prior to the beginning of facility construction. The facility is currently being constructed and has a planned completion date in May 2016. The permit revisions in this submittal reflect changes to the facility that occurred during the construction phase of the project. These changes include minor text revisions to Permit Section 3.14.1; the facility description in Attachment A, *Unit Descriptions*; emergency equipment changes in Attachment D, *Contingency Plan*; and a figure revision in Attachment N, *Figures*, of the Permit.

The Permittees have prepared this permit modification in accordance with Title 40 of the Code of Federal Regulations (40 CFR) §270.42(a)(1). The changes made to the Permit as part of this modification all fall under the conditions of Appendix I of 40 CFR §270.42 for Class 1 permit modifications. A full description



of the permit modification, rationale for the classification types, the necessary permit revisions, and a signed certification page are included in Enclosure 1.

Three hard copies and one electronic copy of this submittal will be delivered to the NMED-HWB. The hardcopy submittal contains pages or sections where text has been changed rather than copies of full attachments of the Permit. The electronic copy will only be provided to NMED-HWB and contains a reproduction of the hardcopy in portable document format (PDF) along with all the word processing and figure files used to create the hardcopy.

The Permittees intend that this permit modification will complete the already approved minor changes to the design and construction of the TA-63 TWF before it is ready for operation. The Permittees will provide a certification letter for the new facility in compliance with Permit Section 1.9.21, *New or Modified Permitted Units*, prior to the start of operation to give notice for the new facility inspection also required by the section. Prior to that event, the Permittees would like to meet with the NMED-HWB to discuss any procedural details your office may anticipate for the inspection and request that this occur as soon as convenient.

Notification of this modification will be sent to the NMED-HWB-maintained LANL facility mailing list within ninety days of the transmittal of this permit modification request in accordance with 40 CFR §270.42(a)(1)(ii).

If you have comments or questions regarding this permit modification, please contact Jordan Arnswald, DOE, at (505) 667-6764 or Mark Haagenstad, LANS, at (505) 665-2014.

Sincerely,



John P. McCann
Acting Division Leader
Environmental Protection and Compliance Division
Los Alamos National Security, LLC

Sincerely,



Kimberly Davis Lebak
Manager
Los Alamos Field Office
U.S. Department of Energy

JPM:KDL:MPH:GB/lm

Enclosures: (1) Class 1 Permit Modification Construction Updates for the Technical Area 63
Transuranic Waste Facility Container Storage Unit, Los Alamos National Laboratory
Hazardous Waste Facility Permit

Cy: Laurie King, USEPA/Region 6, Dallas, TX (E-File)
Dave Cobrain, NMED/HWB, Santa Fe, NM, (E-File)
Siona Briley, NMED/HWB, Santa Fe, NM, (E-File)
Kimberly Davis Lebak, NA-LA, (E-File)
Peter Maggioro, NA-LA, (E-File)
Jordan Arnswald, NA-LA, (E-File)

Cy (continued):

Jody Pugh, NA-LA, (E-File)
Kirsten M. Laskey, EM-LA, (E-File)
Craig S. Leasure, PADOPS, (E-File)
William Mairson, PADOPS, (E-File)
Michael T. Brandt, ADESH, (E-File)
Raeanna Sharp-Geiger, ADESH, (E-File)
Brett A. Cederdahl, PM1, (E-File)
Denise C. Gelston, EWMO-DO, (E-File)
Edward W. Artiglia, ES-EPD, (E-File)
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ENCLOSURE 1

**Class 1 Permit Modification
Construction Updates for the
Technical Area 63 Transuranic Waste Facility
Container Storage Unit,
Los Alamos National Laboratory
Hazardous Waste Facility Permit**

EPC-DO-16-055

LA-UR-16-21335

Date: **MAR 11 2016**

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Permit Modification Notification

This document contains a notification for a Class 1 permit modification to the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (the Permit). The Permit was issued to the Department of Energy (DOE) and Los Alamos National Security, LLC (LANL), collectively described herein as “the Permittees,” in November 2010 by the New Mexico Environment Department – Hazardous Waste Bureau (NMED-HWB). On December 20, 2013, the NMED-HWB approved the addition of the Technical Area (TA)-63 Transuranic Waste Facility (TWF) container storage unit to the Permit. In July, 2014, the Permittees also submitted a Class 1 Notification of Permit Modification (2014 Permit modification) in order to revise the description of the facility in the Permit to include minor changes to the project design that had been incorporated after 2013 (LANL, 2014).

Construction of the facility began in August, 2014 and is scheduled for completion in May, 2016. The permit revisions included in this submittal reflect changes to the facility that have developed or been constrained during construction activities since the original design was approved by the NMED-HWB. Construction changes within the permitted unit involve minor location changes, changes in structure dimensions that require revisions to the descriptions contained in the Permit, and changes in equipment specifications. All the changes meet the criteria for Class 1 permit modification as contained in Title 40 of the Code of Federal Regulations (40 CFR §270.42, Appendix I, *Classification of Permit Modification*).

These changes involve minor text revisions to the facility description in Permit Section 3.14, *TA-63 Container Storage Requirements*; Permit Attachment A, *Unit Descriptions*; Permit Attachment D, *Contingency Plan*; Permit Attachment J, *Hazardous Waste Management Units*; and revision of Figure 56 in Permit Attachment N, *Figures*, of the Permit. The revisions are listed in the general order they appear in the text of the Permit. The text and figure modifications are provided in Attachments 1 through 12 of this document. The modifications to the text of the Permit have been identified using redline and strikeout format. Table 1, *Summary of Changes to the Permit Associated with the Technical Area 63 TWF*, describes the following: 1) each location within the Permit where changes are required, 2) a brief description of the changes made at that location and 3) a justification for the change and any necessary explanation about the change. A certification page is included in Attachment 13 in accordance with the requirements of 40 CFR §270.11.

A. Ignitable and Reactive Waste Storage Boundary Condition

Description

As originally stated in Permit Section 3.14.1(2), the Permittees shall not store containers with ignitable or reactive waste within 15 meters of the permitted unit’s security fence. Permit Attachment A, *Unit Descriptions*, Section A.6.7, *Security and Access Control*, was revised by the 2014 Permit modification to describe the security perimeter as a security barrier system rather than strictly a fence due to the addition of the Metalith™ vehicle barrier components. As the new barrier system is physically larger than the fence, prevents the approach of an

unauthorized person at a greater distance from most of the permitted storage unit, and provides a larger buffer area for the actual storage locations, this revision does not substantively change the preventive nature of the security requirement. Therefore, the sentence has been revised in Permit Sections 3.14.1 and A.6 to replace the term “security fence” with “security barrier system” (see Attachment 1 of this submittal).

Rationale for Class 1 Permit Modification

The Permittees are submitting this change to the NMED-HWB as a Class 1 permit modification notification pursuant to the conditions of 40 CFR §270.42, Appendix I, *Classification of Permit Modification*, Item A.1, for an informational change. The descriptive change in the text of the Permit is limited to an administrative change for consistency.

B. Facility Area Calculation

Description

The TA-63 TWF area discussion given in Permit Attachment A, *Unit Descriptions*, includes the area of the permitted storage unit of 1.81 acres and 78,843 square feet as an approximation based upon the plans developed for the facility design. A review of the site area from the constructed figures indicates the need for a minor adjustment to the area of the permitted storage unit. Additionally, the original text references the TA-63 TWF without making the permitted unit distinction. The sentence has been revised to replace the acreage and square footage figures with 1.82 acres and 79,239 square feet. The sentence has also been revised to more accurately identify the TWF permitted storage unit. (See Attachment 2).

Rationale for Class 1 Permit Modification

The Permittees are submitting this change to the NMED-HWB as a Class 1 permit modification notification pursuant to the conditions of 40 CFR §270.42, Appendix I, *Classification of Permit Modification*, Item A.1, for an informational change. The change in area of the permitted unit is minor and does not affect the waste management operations at the facility.

C. Pad Runoff Grade Description

Description

As included in Permit Attachment A, *Unit Descriptions*, Section A.6.1, *Concrete Pad*, Section A.6.5, *Retention Basin*, and Section A.6.9, *Control of Run-On/Run-off*, the slope of the concrete pad directing run-off to the TA-63 TWF retention basin was described as nominally or approximately 2%. As constructed, the runoff slope of the concrete pad is not constant due to the need to contour the areas between the boundaries of the pad and the storage buildings while maintaining a sufficient slope to direct runoff to the retention basin. Due to this factor, the range of slopes present at the site expressed in percentages is varied and the 2% criteria given in the text represents an upper maximum value. As such, the description in the permit is no longer accurate. Therefore, the affected sections of the facility description have been revised to delete the reference to the 2% slope to avoid the numeric criteria. These permit changes do not affect or change the function of the slope as a requirement to promote drainage to the retention basin. This design change affects several portions of the Permit in Permit Attachment A, *Unit*

Descriptions (see Attachment 3):

- Section A.6.1, *Concrete Pad*, states that “The pad is sloped at an approximate 2% grade to promote drainage of storm water and potential fire suppression water to the retention pond...” This has been altered to read “The pad is sloped as required to drain storm water and potential fire suppression water to the retention pond...”
- Section A.6.5 *Retention Basin*, contains a statement that “The retention basin is designed to collect surface storm water or melt water run-off from the concrete pavement via the slope (nominally 2%) of the concrete pad...” This sentence has been revised by deleting the parenthetical phrase “nominally 2%.”
- Section A.6.9 *Control of Run-On/Run-off*, states that “The TWF site slopes nominally at a 2% grade to promote drainage to the retention pond.” This sentence has been replaced with “The concrete pad within the permitted unit at TWF is sloped as required to drain storm water to the retention pond.”

Rationale for Class 1 Permit Modification

The Permittees are submitting this change to the NMED-HWB as a Class 1 permit modification notification pursuant to the conditions of 40 CFR §270.42, Appendix I, *Classification of Permit Modification*, Item A.1, for an informational change. The basis for this is that the presence and purpose of the slope has not changed although the numeric description requires correction.

D. Storage Pad Perimeter Gutter

Description

Permit Attachment A, *Unit Descriptions*, Section A.6.1, *Concrete Pad*, includes a statement that the perimeter of the concrete pad at the TA-63 TWF has a 24 inch gutter and 6 inch high curb to provide run-off control. This description does not account for various differences in the gutter dimensions across the site as constructed. This description has been changed to provide for some variability and retain the statement that the runoff features are designed to guarantee that any run-off on the site will drain to the retention basin. The 24 inch requirement in the sentence “The perimeter of the pad has a 24” gutter and 6” high curb to provide run-off control” has been deleted. This change does not affect the presence or capacity of the system to provide for run-off control. (See Attachment 4).

Rationale for Class 1 Permit Modification

The Permittees are submitting this change to the NMED-HWB as a Class 1 permit modification notification pursuant to the conditions of 40 CFR §270.42, Appendix I, *Classification of Permit Modification*, Item A.1, for an informational change. The basis for this is that the presence and function of the gutter has not changed although the numeric description requires correction.

E. Retention Basin Capacity

Description

The discussion of the design capacity for the TA-63 TWF retention basin requires a minor correction. The retention basin dimensions described in Permit Attachment A, *Unit Descriptions*, Section A.6.5, *Retention Basin* were revised by the 2014 Permit modification to

125 ft x 42 ft x 5.5 ft deep as the designed depth had been changed due to a revision to the original slope of the retention basin floor. The total designed volume capacity for 137,450 gallons was not changed but the depth increase results in at least a 1 foot freeboard rather than the 0.5 foot freeboard given in the discussion. The section contains a sentence that states: "The designed total retention basin volume also includes 0.5 ft of freeboard, resulting in a total capacity of 137,450 gallons..." The sentence has been altered to state the freeboard is a minimum of 1 foot. (See Attachment 5).

Rationale for Class 1 Permit Modification

The Permittees are submitting this change to the NMED-HWB as a Class 1 permit modification notification pursuant to the conditions of 40 CFR §270.42, Appendix I, *Classification of Permit Modification*, Item A.1, for an informational change. The change is a simple correction of the unit description and does not alter the function or designed capacity of the retention basin.

F. Fire Alarm System Lights

Description

Permit Attachment A, *Unit Descriptions*, Section A.6.8, *Required Equipment*, contains a description of the TA-63 TWF fire alarm equipment that needed revision. The section states that fire system alarms will include red lights to flash to alert personnel of emergency conditions. The fire alarm lights to be installed in the facility may require the use of alternatively colored indicator lights and this description may be too prescriptive. In addition, future repair or replacement of the alarms may be done with alternative colors and this permit condition would potentially complicate purchases in a manner that is not actually necessary for safety. The description has been altered to allow the use of any appropriate alarm light by the deletion of the term "red" from the sentence "...Upon activation of the fire alarm system, an alarm will sound and red lights will flash to alert personnel of emergency conditions..." (See Attachment 6).

Rationale for Class 1 Permit Modification

The Permittees are submitting this change to the NMED-HWB as a Class 1 permit modification notification pursuant to the conditions of 40 CFR §270.42, Appendix I, *Classification of Permit Modification*, Item A.1, for an informational change. The change provides a more accurate description and does not alter the presence or function of the safety system.

G. Communication Radios

Description

Permit Attachment A, *Unit Descriptions*, Section A.6.8, *Required Equipment*, and Permit Attachment D, *Contingency Plan*, discuss the communication equipment that will be available at the TA-63 TWF for use by operations personnel. The discussion references conventional or cellular telephones for use to call the access control station. Current plans for operations at the facility are to also use 2-way radios to enhance this type of communication and this description has been added to the section to provide a more complete description of the communications equipment available. Attachment A, *Unit Descriptions*, Section A.6.8, *Required Equipment*, states that "Personnel working at the TWF have the ability to communicate the location and

nature of hazardous conditions using conventional telephones, or cellular telephones to call the access control station.” The sentence has been revised to include the term “two-way radios.” Table D-5, *TA-63 Transuranic Waste Facility Emergency Equipment*, of the Permit includes a statement that “Telephones for internal and external communication are available for use by any employee...” in the section listing communication equipment. The sentence has been revised to include the text “...and portable 2-way radios...” (See Attachment 7).

Rationale for Class 1 Permit Modification

The Permittees are submitting this change to the NMED-HWB as a Class 1 permit modification notification pursuant to the conditions of 40 CFR §270.42, Appendix I, *Classification of Permit Modification*, Item A.1, for an informational change. The change provides a more complete description and does not alter the function of the safety system.

H. Fire Water System

Description

The discussion of the TA-63 TWF fire protection system has been revised to address changes that have developed since the original design. These include the description of the fire water storage tank and water supply system.

As originally designed and described in Permit Attachment A, *Unit Descriptions*, the TA-63 TWF had a fire suppression system including a 150,000 gallon tank and electric and diesel powered fire pumps to distribute water to automatic sprinkler systems in the storage buildings. The design capacity for the fire water storage tank was increased to 200,000 gallons and the tank has been constructed to that capacity. This represents a positive 25% increase in water available for a fire event but does not impact the design factors that were used to calculate the capacity for the retention basin (see Permit Section A.6.5).

Additionally, the description of the fire pumps is no longer correct in this section of the Permit. The fire water pumps available as constructed are both electric with a diesel generator backup for the event of a loss of main electrical power.

This design change affects Permit Attachment A, *Unit Descriptions*, Section A.6.8, *Required Equipment*. The section states that “...Water will be supplied via the 150,000 gallon tank north of the Operations Support Building with a combination of electric and diesel powered fire pumps to distribute water to automatic sprinkler systems in the buildings...” The sentence has been revised to say “Water will be supplied via the 200,000 gallon tank north of the Operations Support Building with electric fire water pumps backed up with a diesel generator to distribute water to automatic sprinkler systems in the buildings.” (See Attachment 8).

Rationale for Class 1 Permit Modification

The Permittees are submitting this change to the NMED-HWB as a Class 1 permit modification notification pursuant to the conditions of 40 CFR §270.42, Appendix I, *Classification of Permit Modification*, Item A.3, for equipment upgrading or replacement with functionally equivalent components. The changes in the fire suppression system are limited to equipment substitution with equivalent components and do not affect the presence or functionality of the system.

I. Monitoring Well VMW-4 Location

Description

The *TA-63 Transuranic Waste Facility Soil Vapor Monitoring System Report*, submitted to NMED-HWB on October 29, 2015, includes a variance discussion at Section IV that describes a minor change in the location of the VMW-4 monitoring well. The location originally proposed for the monitoring well was situated in close proximity to an underground natural gas delivery line. This proximity is illustrated in a supplemental information letter submitted to NMED on December 6, 2012 (LANL, 2012). The figure included with the submittal shows that the proposed well location northwest of the TA-63 and the Pajarito and Puye Roads intersection is close to a gas line junction and an abandoned line (see Figure 1 of Attachment 9 of this submittal). LANL well siting procedures require a set-back to prevent accidentally drilling into utility services. The originally proposed location is also near a large drainage swale and the drilling site was relocated to the northwest to get better access to an existing dirt road for the drilling rig.

The direction of the move places the monitoring well a small distance closer to the source of the vapor plume being monitored. As included in the October 29, 2015 report, the soil vapor concentrations obtained in the first sampling event for the well were significantly below the soil gas screening levels included in Permit Section 3.14.3, *Subsurface Vapor Monitoring*. In addition, the nature of the VMW-4 sampling well with the position of the source for the vapor plume indicates the position is more closely identified with being a “sentry” location for early warning of soil vapor presence rather than an indicator of the effect of soil vapor emissions on the actual waste management activities at the TA-63 TWF storage buildings. That function is met by the soil vapor monitoring wells VMW-1 and 2 which were installed next to the storage area work buildings. VMW-4 is also not identified as a representative well for determining the effect of vapor emissions near a utility corridor as indicated for VMW-3 (NMED, 2013). The VMW-4 sampling depths of 25 and 60 feet are unlike the 5 foot sampling depth for VMW-3 and are deeper than utility corridor installation depths. For these reasons, there does not appear to be a significant effect associated with the location change.

This design change affects Figure 56 of the approved Permit. Figure 56 has been revised to account for the change in location of the VMW-4 soil vapor monitoring well. (See Attachment 9).

Rationale for Class 1 Permit Modification

The Permittees are submitting this change to the NMED-HWB as a Class 1 permit modification notification pursuant to the conditions of 40 CFR §270.42, Appendix I, *Classification of Permit Modification*, Item A.1, for an informational change. The adjustment in the location of the well is limited to a descriptive revision and does not affect the presence or function of the system.

J. Unit Designations

Description

A general change has been made to provide consistency between the unit structure numbers given in the Permit. The routine use of the numbering system for structures at LANL is to

include zeros before the building number designation, as in “63-0149.” The structure numbers used to describe TA-63 TWF storage buildings did not include this numbering system in some of the descriptions in the Permit and have been altered to do so.

This correction affects two portions of the approved Permit in Permit Attachment D, *Contingency Plan*, Table D-5, *TA-63 Transuranic Waste Facility Emergency Equipment* and Permit Attachment J, *Hazardous Waste Management Units*, Table J-1, *Active Portion of the Facility*. The text identifying structure numbers at the facility has been revised to include the additional zero in the structure designation number as described above. (See Attachment 10).

Rationale for Class 1 Permit Modification

The Permittees are submitting this change to the NMED-HWB as a Class 1 permit modification notification pursuant to the conditions of 40 CFR §270.42, Appendix I, *Classification of Permit Modification*, Item A.1, for an informational change. The correction of the structure numbers is an administrative change associated with LANL structure numbering policy and is made for consistency in the Permit.

K. Receiving Canopy

Description

The original design for the TA-63 TWF included an overhead receiving canopy south of the permitted storage unit. This preliminary design structure was removed and did not appear in subsequent design versions. However, artifacts of that description were present in the 2012 permit modification request used to modify the Permit and appeared in the subsequent text approved for the Permit. These references have been removed.

This correction affects Permit Attachment D, *Contingency Plan*, Table D-5, *TA-63 Transuranic Waste Facility Emergency Equipment* in the section related to communication equipment. The section states “Fire alarm pull stations are located in the storage buildings, the receiving canopy, and at operations support building.” The sentence has been revised to delete the reference to a receiving canopy. In addition, references to the structure number for the canopy, “63-0145,” have been removed from the text of Table D-5. (See Attachment 11).

Rationale for Class 1 Permit Modification

The Permittees are submitting this change to the NMED-HWB as a Class 1 permit modification notification pursuant to the conditions of 40 CFR §270.42, Appendix I, *Classification of Permit Modification*, Item A.1, for an informational change. The basis for the change is to correct the facility description and the change does not affect any facility functions.

L. Decontamination Equipment Specification

Description

The requirement for decontamination equipment at the TA-63 TWF was revised to provide more detail regarding the locations of the equipment. The text in Table D-5 of the Permit originally stated that eyewash and emergency shower stations and safety data sheets were available in the storage buildings and the Operation Support Building. This has been revised for clarity to show

that the eyewash/shower stations are present in the specific storage buildings where waste management operations occur and the safety data sheets (SDSs) are available in the Operation Support Building.

This modification affects the approved Permit in Permit Attachment D, Contingency *Plan*, Table D-5, *TA-63 Transuranic Waste Facility Emergency Equipment*, in the section related to decontamination equipment. The section states “Eyewash/emergency shower stations and SDSs are available in the storage buildings and the Operation Support Building.” This sentence has been revised to say “Eyewash/emergency shower stations are available at TA-63-0149, TA-63-0150, TA-63-0151, TA-63-0152, TA-63-0153, and TA-63-0154. SDSs are available in the Operation Support Building.” (See Attachment 12).

Rationale for Class 1 Permit Modification

The Permittees are submitting this change to the NMED-HWB as a Class 1 permit modification notification pursuant to the conditions of 40 CFR §270.42, Appendix I, *Classification of Permit Modification*, Item A.1, for an informational change. The change provides a more complete description and does not affect any facility functions.

Table 1. Summary of Changes to the Permit Associated with the TA-63 Transuranic Waste Facility

Permit Section	Revision Description	40 CFR §270.42, Appendix I Item	Justification
Permit Section 3.14.1, <i>General Operating Conditions</i> .	Ignitable and reactive waste boundary description	A.1	The change is needed in the facility description to provide information regarding the buffer area change due to the re-designation and location of the security barrier system.
Permit Attachment A, <i>Unit Descriptions</i> .	Facility area description	A.1	The change is needed in the facility description to provide a minor revision to the area of the TWF permitted unit.
Permit Attachment A, <i>Unit Descriptions</i> , Sections A.6.1, A.6.5, and A.6.9.	Pad runoff grade description	A.1	The change is needed in the facility description to provide more complete information regarding the concrete pad slope.
Permit Attachment A, <i>Unit Descriptions</i> , Section A.6.1.	Perimeter gutter description	A.1	The change is needed in the facility description to provide for a range of widths in the perimeter gutter as constructed.
Permit Attachment A, <i>Unit Descriptions</i> , Section A.6.5.	Retention basin capacity	A.1	The change is needed in the facility description to provide updated information regarding the retention basin dimensions.
Attachment A, <i>Unit Descriptions</i> , Section A.6.8.	Fire alarm system light description	A.1	The change is needed in the facility description to provide for the potential variability in fire alarm signals.
Attachment A, <i>Unit Descriptions</i> , Section A.6.8.	Addition of communication radios	A.1	The change is needed in the facility description to provide updated information for communications equipment.
Permit Attachment A, <i>Unit Descriptions</i> , Section A.6.8.	Fire system description	A.3	The change is needed in the facility description to provide updated information regarding the available fire control equipment.
Attachment A, <i>Unit Descriptions</i> , Section A.6.10.	Monitoring well VMW-4 location	A.1	The change is needed in the facility description to provide information regarding the minor relocation of the soil vapor monitoring well due to site constraints.
Permit Table D-5	Unit designations	A.1	The change is needed in the facility structure identifiers for consistency in the Permit.
Permit Table D-5	Receiving canopy text deletion	A.1	The change is needed in the facility description to delete a structure incorrectly retained in the Permit descriptions.
Permit Table D-5	Decontamination equipment specification	A.1	The change is needed in the facility description to provide better specificity for the locations of decontamination equipment and resources.

Document: Class 1 TA-63 TWF Update
Date: March 2016

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References

Los Alamos National Laboratory Hazardous Waste Facility Permit, issued by New Mexico Environment Department, Hazardous Waste Bureau, November 30, 2010 and subsequent revisions.

LANL, 2012. *Utilities Figure, TA-63 Transuranic Waste Facility Permit Modification Request*, ENV-RCRA-12-0262, December 6, 2012, LAUR 12-26245. Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 2014. *Notification of Class 1 Permit Modification Updates Associated with the Technical Area 63 Transuranic Waste Facility Container Storage Unit of the Los Alamos National Laboratory Hazardous Waste Facility Permit*, July 28, 2014, LAUR 14-25375. Los Alamos National Laboratory, Los Alamos, New Mexico.

LANL, 2015. *TA-63 Transuranic Waste Facility Soil Vapor Monitoring System Report*, ENV-DO-15-0305, October 29, 2015, LAUR 15-28198. Los Alamos National Laboratory, Los Alamos New Mexico.

NMED, 2013. *Hazardous Waste Permit for Los Alamos National Laboratory, Technical Area 63 Transuranic Waste Facility Draft Permit, Responses to Comments*, December 20, 2013. New Mexico Environment Department, Santa Fe, New Mexico.

Document: Class I TA-63 TWF Update
Date: March 2016

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Document: Class 1 TA-63 TWF Update
Date: March 2016

Attachment 1
Permit Section 3.14.1
Ignitable and Reactive Waste Boundary Description Revision

Document: Class 1 TA-63 TWF Update
Date: March 2016

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3.13 TA-55 CONTAINER STORAGE REQUIREMENTS

3.13.1 General Operating Conditions

The Permittees shall ensure that storage of hazardous or mixed waste in containers at TA-55 occurs only in the permitted units B45, B40, B05, K13, the vault located at TA-55-4, TA-55-185, and the outdoor container storage pad located northwest of TA-55-4, and as identified in Attachment A (*Technical Area Unit Descriptions*) and Attachment J (*Hazardous Waste Management Units*).

3.14 TA-63 CONTAINER STORAGE REQUIREMENTS

3.14.1 General Operating Conditions

The Permittees shall ensure that storage and characterization of hazardous waste in containers at the Transuranic Waste Facility (TWF) occurs only on the permitted unit pad at TA-63, and as identified in Attachment A (*Technical Area Unit Descriptions*) and Attachment J (*Hazardous Waste Management Units*). This includes five storage buildings, the storage and characterization building, the characterization trailers, and the outside areas of the concrete pad within the unit boundary subject to the provisions of Permit Section 3.5.1, *Storage Configuration and Minimum Aisle Space*.

- (1) The Permittees shall store all hazardous waste containers known or suspected of holding free liquids on secondary containment pallets. If containers with free liquid are stored in the characterization trailers without secondary containment pallets for longer than 24 hours, the Permittees shall follow the reporting conditions of Permit Section 1.9.14, Other Noncompliance.
- (2) The Permittees shall not store containers with ignitable or reactive waste (E.P.A. Hazardous Waste Numbers D001 or D003) within 15 meters of the permitted unit's security ~~barrier system~~fence shown in Figure 55 (*see* 40 CFR §264.176 and §270.32(b)(2)).
- (3) The Permittees shall only accept TRU and mixed TRU waste containers at the TWF if they are closed and equipped with filter vents approved for containers destined for the Waste Isolation Pilot Plant. The Permittees shall not open waste containers during storage or characterization at the TWF, although the Permittees may replace filter vents on TRU and mixed TRU waste containers if necessary (*see* 40 CFR §270.32(b)(2)).
- (4) The Permittees shall not accept the following waste for storage at the TWF:
 - a. Remote-handled TRU waste

between Ten-Site Canyon, a tributary of Mortandad Canyon, on the north and Pajarito Canyon on the south in the central portion of the Facility (*see* Figure 54 in Attachment N (*Figures*)). The unit is built at the intersection of Pajarito Road and Puye Road, within the triangle formed by Building 63-111 to the east, Puye Road to the north, and Pajarito Road to the southwest.

The TWF consists of one hazardous waste management unit that is used to store containers of newly generated hazardous, mixed low-level, and mixed TRU waste. Waste containers may be characterized at the TWF, as described in Permit Sections A.6.4 and A.6.5, and in applicable sections of Permit Attachment C, *Waste Analysis Plan*. Characterization activities at the TWF include review of generator acceptable knowledge (AK) documentation, head-space and flammable gas sampling, non-destructive assay (NDA), and non-destructive examination (NDE). Waste containers will be accepted at the TWF only if they are closed and equipped with Waste Isolation Pilot Plant (WIPP) approved filter vents. Waste containers are not opened during storage or characterization at the TWF, although their filter vents may be replaced if necessary. Remote-handled TRU waste is not managed at the TWF.

The types of waste containers holding hazardous or mixed waste that are stored at the TWF include: 55- and 85-gallon drums; 55-gallon pipe overpack containers (POCs); Standard Waste Boxes (SWBs); Oversize Waste Boxes (OWBs); and Standard Large Box 2s (SLB2s).

Some TRU waste containers are determined through final waste characterization not to meet the WIPP requirements for TRU waste. Depending on the presence of hazardous constituents, these waste containers are reclassified as either low-level waste or mixed low-level waste and stored at the TWF until they are dispositioned appropriately.

Waste shipments are made from the LANL waste generating facilities to the TWF for storage and characterization. TRU waste is then shipped to the RCRA permitted Radioactive Assay and Nondestructive Testing (RANT) Facility at TA-54-38 West. The RANT Facility is used to load the TRU waste containers into TRUPACTs (steel shipment containers) required for off-site shipment to the WIPP. TRU waste may also be shipped from TWF to the RCRA permitted TA-50-69 Waste Characterization, Reduction, and Repackaging Facility (WCRRF) for repackaging and/or remediation of prohibited items if necessary. Low-level waste may be shipped from TWF to other LANL facilities or to off-site treatment or disposal facilities.

The TWF permitted storage unit is constructed on 1.821 acres (798,239.843 square feet). The layout of the unit is depicted in Figure 55. The main structure for the unit is a concrete pad providing a physical base for six waste storage buildings, three waste characterization trailers, and outside storage of waste containers that are too large for placement in the buildings. The pad is surrounded by a security fence/barrier system. The boundary of the hazardous waste management unit is limited to the northern portion of the concrete pad defined by those areas that drain to a retention basin. Along the northern and western sides of the unit, this is the edge of the concrete pad along the bottom of the retaining walls. On the east side, the edge of the curbing for the concrete pad is the boundary. The southern side of the boundary is defined by a painted line in compliance with Permit Section 3.5(2), *Management of Containers*. The line is situated approximately between the south east corner of the retention basin and the curb and gutter at the opposite corner of the fence line along the eastern side of the unit. This is defined by the limits of the catchment that drains to the retention basin.

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Attachment 2
Permit Attachment A
Facility Area Description Revisions

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between Ten-Site Canyon, a tributary of Mortandad Canyon, on the north and Pajarito Canyon on the south in the central portion of the Facility (*see* Figure 54 in Attachment N (*Figures*)). The unit is built at the intersection of Pajarito Road and Puye Road, within the triangle formed by Building 63-111 to the east, Puye Road to the north, and Pajarito Road to the southwest.

The TWF consists of one hazardous waste management unit that is used to store containers of newly generated hazardous, mixed low-level, and mixed TRU waste. Waste containers may be characterized at the TWF, as described in Permit Sections A.6.4 and A.6.5, and in applicable sections of Permit Attachment C, *Waste Analysis Plan*. Characterization activities at the TWF include review of generator acceptable knowledge (AK) documentation, head-space and flammable gas sampling, non-destructive assay (NDA), and non-destructive examination (NDE). Waste containers will be accepted at the TWF only if they are closed and equipped with Waste Isolation Pilot Plant (WIPP) approved filter vents. Waste containers are not opened during storage or characterization at the TWF, although their filter vents may be replaced if necessary. Remote-handled TRU waste is not managed at the TWF.

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Some TRU waste containers are determined through final waste characterization not to meet the WIPP requirements for TRU waste. Depending on the presence of hazardous constituents, these waste containers are reclassified as either low-level waste or mixed low-level waste and stored at the TWF until they are dispositioned appropriately.

Waste shipments are made from the LANL waste generating facilities to the TWF for storage and characterization. TRU waste is then shipped to the RCRA permitted Radioactive Assay and Nondestructive Testing (RANT) Facility at TA-54-38 West. The RANT Facility is used to load the TRU waste containers into TRUPACTs (steel shipment containers) required for off-site shipment to the WIPP. TRU waste may also be shipped from TWF to the RCRA permitted TA-50-69 Waste Characterization, Reduction, and Repackaging Facility (WCRRF) for repackaging and/or remediation of prohibited items if necessary. Low-level waste may be shipped from TWF to other LANL facilities or to off-site treatment or disposal facilities.

The TWF permitted storage unit is constructed on 1.824 acres (798,239,843 square feet). The layout of the unit is depicted in Figure 55. The main structure for the unit is a concrete pad providing a physical base for six waste storage buildings, three waste characterization trailers, and outside storage of waste containers that are too large for placement in the buildings. The pad is surrounded by a security ~~fence~~barrier system. The boundary of the hazardous waste management unit is limited to the northern portion of the concrete pad defined by those areas that drain to a retention basin. Along the northern and western sides of the unit, this is the edge of the concrete pad along the bottom of the retaining walls. On the east side, the edge of the curbing for the concrete pad is the boundary. The southern side of the boundary is defined by a painted line in compliance with Permit Section 3.5(2), *Management of Containers*. The line is situated approximately between the south east corner of the retention basin and the curb and gutter at the opposite corner of the fence line along the eastern side of the unit. This is defined by the limits of the catchment that drains to the retention basin.

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Attachment 3
Pad Runoff Grade Revisions

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The retention basin is designed to capture storm water run-off and fire suppression water released in the event of a fire at the TWF, as described in Permit Section A.6.5.

The unit also includes a small storage building for calibration sources used for waste characterization activities. Outside the boundary of the unit, other site structures include an operations support building, a fire water storage tank, an associated utility building, a covered forklift charging station, and an equipment storage shed.

A.6.1 Concrete Pad

The TWF pad consists of 8-inch thick reinforced concrete to provide support for the site structures and vehicle movement. The pad rests on leveled gravel base course and is nominally 8 inches thick. The existing ground at the site slopes from the northwest to the southeast. There is a significant grade difference from the northwest corner to the southwest corner of the site. Portions are lower in elevation than Pajarito Road and Puye Road. Given the elevation difference on the site, retaining walls were constructed along the northwest portion of the site. The pad is sloped as ~~required an approximate 2% grade to promote drainage of~~ storm water and potential fire suppression water to the retention pond.

The perimeter of the pad has a ~~24"~~ gutter and 6" high curb to provide run-off control. A valley gutter isolates the northern portion of the pad. Storm water and potentially contaminated fire suppression water flow from the northern portion of the pad flows to the valley gutter that drains to the retention basin. This feature substitutes for berms, dikes, or sumps specific to each storage building. The southern portion of the pad, which is outside the hazardous waste management unit where waste is not stored, slopes to the southeast and drains off the pad toward the parking lot. Figure 55 provides details regarding the pad configuration.

A.6.2 Storage Buildings

The TWF includes six storage buildings, five of which are functionally identical and are described in this section. The remaining storage building is described in section A.6.3. The five buildings measure 33 x 64 ft or approximately 2112 square feet, and are 15 ft high. The storage buildings provide covered storage for hazardous, mixed low-level, and mixed TRU waste containers generated during current Facility operations. Multiple buildings are used to minimize the radioactive material content in individual storage buildings and to reduce the potential impact from accidents relative to a single larger building. These five storage buildings are designated 63-0149, 63-0150, 63-0151, 63-0152, and 63-0153.

The storage buildings are constructed as covered single-story structural steel frames. Each of the storage buildings and its structural members are designed to exceed the snow load for roof design, the design wind force for buildings, and the seismic loading for structural components, as described in American Society of Civil Engineers specification ASCE 7-05, *Minimum Design Loads for Buildings and Other Structures*. The steel frame is an ordinary moment frame with joists to attach roof panels and girts to attach wall panels. The walls of the facility are rigid to provide protection from the elements and external forces. Gypsum board on light gauge metal studs with industrial coating finish the interior walls. The roof is a high quality metal standing seam. Batt insulation in the ceiling and on the inside of the walls reduces heat loss and gain

A.6.5 Retention Basin

The retention basin is located south of the storage buildings and characterization trailers in the south-western corner of the permitted unit. The retention basin is designed to collect surface storm water or melt water run-off from the concrete pavement via the slope (~~nominally 2%~~) of the concrete pad, and in the event of a fire at the unit, fire suppression water that could flow out of the storage buildings or from other unit structures to the concrete pad.

The designed volume capacity for the retention basin includes the potential for a combination of both events. This includes run-off from a projected 25 year frequency and 2 hour duration precipitation event (1.94 inches of precipitation resulting in approximately 95,400 gallons (12,750 cubic ft.) from 1.81 acres). For a fire suppression event, an estimate of suppression water needed is calculated from NFPA 13 factors (380 gpm for 30 min. of sprinkler demand and 500 gpm for 30 min. fire hose stream allowance), for a total of approximately 26,400 gallons (3,530 cubic ft.). Volume from both events results in a total capacity of approximately 121,800 gallons (approximately 16,300 cubic ft.). The designed total retention basin volume also includes a minimum of 10.5 ft of freeboard, resulting in a total capacity of 137,450 gallons (18,375 cubic ft.). The dimensions of the basin are 125 ft by 42 ft by 5.5 ft deep. The retention basin is equipped with a manual release valve that may be used to discharge collected water that meets appropriate surface water discharge standards, as required by Permit Section 3.14.2. The concrete mixture used for construction of the retention basin is supplemented with an additive to improve the concrete's water resistance.

Routine inspections of the retention basin pursuant to Permit Section 2.6, *General Inspection Requirements* and subsequent repairs as required by Permit Section 2.6.2, *Repair of Equipment and Structures* are conducted to ensure that the integrity of the retention basin is maintained.

A.6.6 Other Project Structures

Other project structures are present at the TWF to provide support for the hazardous waste management activities at the unit. These structures are either located outside the boundary of the hazardous waste management unit or are not used to store or manage hazardous waste.

The Operations Support Building provides offices and services for operations personnel and management. Personnel are housed in the separate building to ensure that radiological exposures are as low as reasonably achievable (ALARA) by increasing distance from the waste management activities. The Operations Support Building is approximately 75 ft by 80 ft. Operations and characterization personnel are housed in this building, although it will not be occupied continuously. However, it provides storage of waste container data and monitoring of key operational parameters (e.g., fire alarm systems, safety equipment status indicators, and communication systems including the public address system) and specific safety structure, system, and component status. The building is located outside the security control fence; windows provide visual observation of the control area.

Vehicle access to the hazardous waste management unit is through a gated driveway located east of the concrete pad. Gates are kept closed and vehicle access to the controlled area within the

are available at the TWF. Overpack drums and sorbents are also stored in an equipment storage shed on the west side of the TWF. Emergency personnel can also provide additional spill control equipment and assistance upon request depending on the size and severity of the spill. Personnel decontamination equipment at the TWF includes safety showers and eye wash stations located inside each of the storage buildings. These are situated in all waste storage buildings in accordance with OSHA requirements. Additional decontamination equipment may be provided by emergency personnel. SDS (e.g., for cleaners, solvents, used on site) are available at the Operations Support Building to provide exposure information in accordance with OSHA requirements.

A.6.9 Control of Run-on/Run-off

Controlling run-on and run-off at the TWF locations where waste management operations occur is accomplished by the design of the buildings and the use of control structures with appropriate contouring of surface areas. Run-on of storm water into the storage buildings is prevented by walls that enclose raised floors and surface contouring that slopes away from the building to prevent storm water from pooling against the foundations, doors, and loading areas. The internal floors of the buildings are sloped toward the front doors to prevent flooding by precipitation or storm water in addition to providing internal drainage to the outside.

The concrete pad within the permitted unit at TWF ~~is site~~ sloped ~~as required nominally at a 2% grade~~ to ~~drain storm water~~ promote drainage to the retention pond. A retention wall prevents slope failure between the surrounding roads and the site. The site is surfaced in concrete and includes a retention basin for collection and management of storm water and fire suppression water as described in Section A.6.5 above.

The secondary containment provided by secondary containment pallets has sufficient capacity to contain at least 10 % of the volume of containers or the volume of the largest container stored in the system, whichever is greater, pursuant to the requirements of 40 CFR §264.175(b)(3) and Permit Section 3.7, *Containment Systems*.

A.6.10 Subsurface Vapor Monitoring

The Permittees shall install a subsurface vapor monitoring network consisting of a minimum of five vapor monitoring wells in the vicinity of the buildings located within the TWF facility to evaluate for vapor-phase contaminants that may migrate from MDA C. Two of the monitoring wells must be located as close as possible to the building foundations that are adjacent to the unit boundary facing MDA C and the utility corridor on Puye Road as depicted by locations VMW-1 and VMW-2 on Figure 56 in Attachment N (Figures). A third monitoring well must be located at a point on the western edge of the permitted unit as close as possible to the utility corridor on Pajarito Road as depicted by location VMW-3 on Figure 56. Two monitoring wells must be located between MDA C and Puye Rd as depicted by locations VMW-4 and VMW-5 on Figure 56. These five wells must be installed and operational within 90 days of completion of construction of the TWF buildings.

Vapor monitoring wells VMW-1, VMW-2, and VMW-3 shall be constructed with a single vapor monitoring port located in the center of a sampling interval between 5 ft and 10 ft below

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Attachment 4
Perimeter Gutter Revision

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The retention basin is designed to capture storm water run-off and fire suppression water released in the event of a fire at the TWF, as described in Permit Section A.6.5.

The unit also includes a small storage building for calibration sources used for waste characterization activities. Outside the boundary of the unit, other site structures include an operations support building, a fire water storage tank, an associated utility building, a covered forklift charging station, and an equipment storage shed.

A.6.1 Concrete Pad

The TWF pad consists of 8-inch thick reinforced concrete to provide support for the site structures and vehicle movement. The pad rests on leveled gravel base course and is nominally 8 inches thick. The existing ground at the site slopes from the northwest to the southeast. There is a significant grade difference from the northwest corner to the southwest corner of the site. Portions are lower in elevation than Pajarito Road and Puye Road. Given the elevation difference on the site, retaining walls were constructed along the northwest portion of the site. The pad is sloped ~~as required to an approximate 2% grade to promote drainage of~~ storm water and potential fire suppression water to the retention pond.

The perimeter of the pad has a ~~24"~~ gutter and 6" high curb to provide run-off control. A valley gutter isolates the northern portion of the pad. Storm water and potentially contaminated fire suppression water flow from the northern portion of the pad flows to the valley gutter that drains to the retention basin. This feature substitutes for berms, dikes, or sumps specific to each storage building. The southern portion of the pad, which is outside the hazardous waste management unit where waste is not stored, slopes to the southeast and drains off the pad toward the parking lot. Figure 55 provides details regarding the pad configuration.

A.6.2 Storage Buildings

The TWF includes six storage buildings, five of which are functionally identical and are described in this section. The remaining storage building is described in section A.6.3. The five buildings measure 33 x 64 ft or approximately 2112 square feet, and are 15 ft high. The storage buildings provide covered storage for hazardous, mixed low-level, and mixed TRU waste containers generated during current Facility operations. Multiple buildings are used to minimize the radioactive material content in individual storage buildings and to reduce the potential impact from accidents relative to a single larger building. These five storage buildings are designated 63-0149, 63-0150, 63-0151, 63-0152, and 63-0153.

The storage buildings are constructed as covered single-story structural steel frames. Each of the storage buildings and its structural members are designed to exceed the snow load for roof design, the design wind force for buildings, and the seismic loading for structural components, as described in American Society of Civil Engineers specification ASCE 7-05, *Minimum Design Loads for Buildings and Other Structures*. The steel frame is an ordinary moment frame with joists to attach roof panels and girts to attach wall panels. The walls of the facility are rigid to provide protection from the elements and external forces. Gypsum board on light gauge metal studs with industrial coating finish the interior walls. The roof is a high quality metal standing seam. Batt insulation in the ceiling and on the inside of the walls reduces heat loss and gain

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Attachment 5

Retention Basin Capacity

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A.6.5 Retention Basin

The retention basin is located south of the storage buildings and characterization trailers in the south-western corner of the permitted unit. The retention basin is designed to collect surface storm water or melt water run-off from the concrete pavement via the slope ~~(nominally 2%)~~ of the concrete pad, and in the event of a fire at the unit, fire suppression water that could flow out of the storage buildings or from other unit structures to the concrete pad.

The designed volume capacity for the retention basin includes the potential for a combination of both events. This includes run-off from a projected 25 year frequency and 2 hour duration precipitation event (1.94 inches of precipitation resulting in approximately 95,400 gallons (12,750 cubic ft.) from 1.81 acres). For a fire suppression event, an estimate of suppression water needed is calculated from NFPA 13 factors (380 gpm for 30 min. of sprinkler demand and 500 gpm for 30 min. fire hose stream allowance), for a total of approximately 26,400 gallons (3,530 cubic ft.). Volume from both events results in a total capacity of approximately 121,800 gallons (approximately 16,300 cubic ft.). The designed total retention basin volume also includes a minimum of 10.5 ft of freeboard, resulting in a total capacity of 137,450 gallons (18,375 cubic ft.). The dimensions of the basin are 125 ft by 42 ft by 5.5 ft deep. The retention basin is equipped with a manual release valve that may be used to discharge collected water that meets appropriate surface water discharge standards, as required by Permit Section 3.14.2. The concrete mixture used for construction of the retention basin is supplemented with an additive to improve the concrete's water resistance.

Routine inspections of the retention basin pursuant to Permit Section 2.6, *General Inspection Requirements* and subsequent repairs as required by Permit Section 2.6.2, *Repair of Equipment and Structures* are conducted to ensure that the integrity of the retention basin is maintained.

A.6.6 Other Project Structures

Other project structures are present at the TWF to provide support for the hazardous waste management activities at the unit. These structures are either located outside the boundary of the hazardous waste management unit or are not used to store or manage hazardous waste.

The Operations Support Building provides offices and services for operations personnel and management. Personnel are housed in the separate building to ensure that radiological exposures are as low as reasonably achievable (ALARA) by increasing distance from the waste management activities. The Operations Support Building is approximately 75 ft by 80 ft. Operations and characterization personnel are housed in this building, although it will not be occupied continuously. However, it provides storage of waste container data and monitoring of key operational parameters (e.g., fire alarm systems, safety equipment status indicators, and communication systems including the public address system) and specific safety structure, system, and component status. The building is located outside the security control fence; windows provide visual observation of the control area.

Vehicle access to the hazardous waste management unit is through a gated driveway located east of the concrete pad. Gates are kept closed and vehicle access to the controlled area within the

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Attachment 6

Fire Alarm System Light Description

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discussed below. Emergency equipment is located throughout the TWF and includes fire alarms, fire response systems, alarm systems, internal communications, spill kits, and decontamination equipment.

Fire-alarm pull boxes and/or drop box push-button alarms are located pursuant to NFPA standards in the TWF where waste management activities are conducted. Fire-alarm pull boxes can be used by personnel to activate a local fire alarm when a fire or other emergency is discovered. Once manually activated, an alarm will sound in the TWF access control station and at the LAFD through Los Alamos County Consolidated Dispatch Center. The TWF is also equipped with automatic fire suppression alarm systems. The fire-suppression alarms will be activated when water flow is detected in the sprinkler pipes of the fire-suppression system. Upon activation of the fire-alarm system, an alarm will sound and ~~red~~ lights will flash to alert personnel of emergency conditions. All fire-alarm pull boxes and automatic fire-suppression systems located at the TWF are connected to the LAFD through Los Alamos County Consolidated Dispatch Center.

In addition to the alarms described above, a public address (PA) system is available to announce emergency conditions or to initiate an evacuation at the TWF. The PA system is audible throughout the TWF and is activated from the access control station in the Operations Support Building.

Personnel working at the TWF have the ability to communicate the location and nature of hazardous conditions using 2-way radios, conventional telephones, or cellular telephones to call the access control station. This type of call will summon assistance from the EO-EM, local police and fire departments, and state emergency response teams, as necessary.

Fire control equipment is readily available in the hazardous waste management unit. Portable fire extinguishers are available and may be used by trained on-site personnel depending on the size of the fire and the fuel source. However, LANL policy encourages immediate evacuation of the area and notification of appropriate emergency personnel. Fire hydrants are located in accordance with NFPA standards on the west and east sides of the TWF pad and near the Operations Building. Water is supplied to the fire hydrants by a municipal water system which can provide adequate volume and pressure (i.e., greater than 1,000 gal per minute and 90 pounds per square inch static pressure) to multiple water hoses in the event of a fire. The LAFD will supply all water hoses needed in the event of a fire at the TWF. Fire protection systems for the TWF storage buildings, including the Storage and Characterization Building 63-0154, include a dry-pipe sprinkler system for fire suppression. Water will be supplied via the ~~20150,000~~ 50,000 gallon tank north of the Operations Support Building with ~~a combination of electric and diesel-powered~~ fire water pumps backed up with a diesel generator to that distribute water to automatic sprinkler systems in the buildings.

Spill response kits are available at the TWF in the storage areas to mitigate containable spills. These kits typically contain sorbents, neutralizers, personal protective equipment (PPE), and other equipment essential for containment of spills. Trained personnel will use the spill kits only if the composition of the release is known and they are sure their actions will not put themselves or others at risk. In addition to the spill kits, cleanup equipment such as shovels, bags and drums

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Attachment 7

Addition of Communication Radios Revision

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discussed below. Emergency equipment is located throughout the TWF and includes fire alarms, fire response systems, alarm systems, internal communications, spill kits, and decontamination equipment.

Fire-alarm pull boxes and/or drop box push-button alarms are located pursuant to NFPA standards in the TWF where waste management activities are conducted. Fire-alarm pull boxes can be used by personnel to activate a local fire alarm when a fire or other emergency is discovered. Once manually activated, an alarm will sound in the TWF access control station and at the LAFD through Los Alamos County Consolidated Dispatch Center. The TWF is also equipped with automatic fire suppression alarm systems. The fire-suppression alarms will be activated when water flow is detected in the sprinkler pipes of the fire-suppression system. Upon activation of the fire-alarm system, an alarm will sound and ~~red~~ lights will flash to alert personnel of emergency conditions. All fire-alarm pull boxes and automatic fire-suppression systems located at the TWF are connected to the LAFD through Los Alamos County Consolidated Dispatch Center.

In addition to the alarms described above, a public address (PA) system is available to announce emergency conditions or to initiate an evacuation at the TWF. The PA system is audible throughout the TWF and is activated from the access control station in the Operations Support Building.

Personnel working at the TWF have the ability to communicate the location and nature of hazardous conditions using 2-way radios, conventional telephones, or cellular telephones to call the access control station. This type of call will summon assistance from the EO-EM, local police and fire departments, and state emergency response teams, as necessary.

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Spill response kits are available at the TWF in the storage areas to mitigate containable spills. These kits typically contain sorbents, neutralizers, personal protective equipment (PPE), and other equipment essential for containment of spills. Trained personnel will use the spill kits only if the composition of the release is known and they are sure their actions will not put themselves or others at risk. In addition to the spill kits, cleanup equipment such as shovels, bags and drums

COMMUNICATION EQUIPMENT

Telephones and the public address system are located inside the Operations Support Building.

Description of General Capabilities:

- | Telephones and portable 2-way radios for internal and external communication are available for use by any employee. Employees can be notified of an emergency situation and appropriate response action through the public address system.
- | Fire alarm pull stations are located in the storage buildings, ~~the receiving canopy~~, and at operations support building.

Description of General Capabilities:

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

Fire and public address system alarms

Description of General Capabilities:

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

DECONTAMINATION EQUIPMENT

- | Eyewash/emergency shower stations are available at TA-63-0149, TA-063-0150, TA-63-0151, TA-63-0152, TA-63-0153, and TA-63-0154. and SDSs are available in the ~~storage buildings and the~~ Operation Support Building. SDS information is maintained where appropriate for personnel accessibility and are used for chemicals that will be needed to support operations or emergency activities.

Description of General Capabilities:

Eyewashes and emergency showers may be used by personnel who receive a chemical splash to the eyes or body. Specific SDSs should be reviewed prior to working with chemicals.

PERSONAL PROTECTIVE EQUIPMENT

Personnel at TWF are required to use appropriate personal protective equipment (PPE) protect themselves from hazards found under normal conditions. This PPE may include gloves, steel toe shoes, and eye protection, additional PPE may be required during unusual hazardous situations. First aid kits and hearing protection are also available.

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Attachment 8

Fire System Description Revision

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discussed below. Emergency equipment is located throughout the TWF and includes fire alarms, fire response systems, alarm systems, internal communications, spill kits, and decontamination equipment.

Fire-alarm pull boxes and/or drop box push-button alarms are located pursuant to NFPA standards in the TWF where waste management activities are conducted. Fire-alarm pull boxes can be used by personnel to activate a local fire alarm when a fire or other emergency is discovered. Once manually activated, an alarm will sound in the TWF access control station and at the LAFD through Los Alamos County Consolidated Dispatch Center. The TWF is also equipped with automatic fire suppression alarm systems. The fire-suppression alarms will be activated when water flow is detected in the sprinkler pipes of the fire-suppression system. Upon activation of the fire-alarm system, an alarm will sound and red-lights will flash to alert personnel of emergency conditions. All fire-alarm pull boxes and automatic fire-suppression systems located at the TWF are connected to the LAFD through Los Alamos County Consolidated Dispatch Center.

In addition to the alarms described above, a public address (PA) system is available to announce emergency conditions or to initiate an evacuation at the TWF. The PA system is audible throughout the TWF and is activated from the access control station in the Operations Support Building.

Personnel working at the TWF have the ability to communicate the location and nature of hazardous conditions using 2-way radios, conventional telephones, or cellular telephones to call the access control station. This type of call will summon assistance from the EO-EM, local police and fire departments, and state emergency response teams, as necessary.

Fire control equipment is readily available in the hazardous waste management unit. Portable fire extinguishers are available and may be used by trained on-site personnel depending on the size of the fire and the fuel source. However, LANL policy encourages immediate evacuation of the area and notification of appropriate emergency personnel. Fire hydrants are located in accordance with NFPA standards on the west and east sides of the TWF pad and near the Operations Building. Water is supplied to the fire hydrants by a municipal water system which can provide adequate volume and pressure (i.e., greater than 1,000 gal per minute and 90 pounds per square inch static pressure) to multiple water hoses in the event of a fire. The LAFD will supply all water hoses needed in the event of a fire at the TWF. Fire protection systems for the TWF storage buildings, including the Storage and Characterization Building 63-0154, include a dry-pipe sprinkler system for fire suppression. Water will be supplied via the 20150,000 gallon tank north of the Operations Support Building with ~~a combination of electric and diesel-powered~~ fire water pumps backed up with a diesel generator to that distribute water to automatic sprinkler systems in the buildings.

Spill response kits are available at the TWF in the storage areas to mitigate containable spills. These kits typically contain sorbents, neutralizers, personal protective equipment (PPE), and other equipment essential for containment of spills. Trained personnel will use the spill kits only if the composition of the release is known and they are sure their actions will not put themselves or others at risk. In addition to the spill kits, cleanup equipment such as shovels, bags and drums

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Attachment 9

Monitoring Well VMW-4 Location Revision

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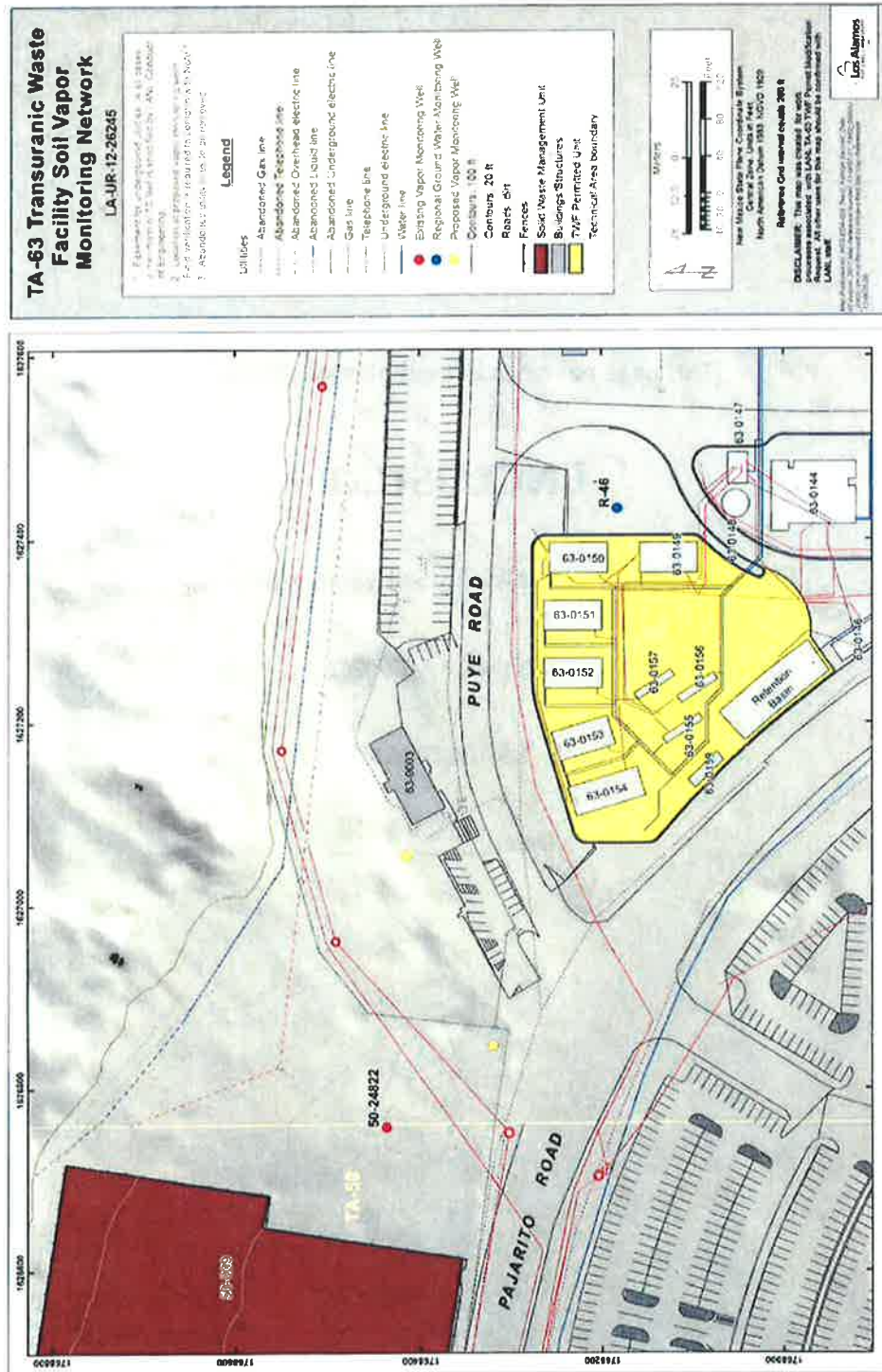


Figure 1: TWF Utilities Figure (LANL, 2012)

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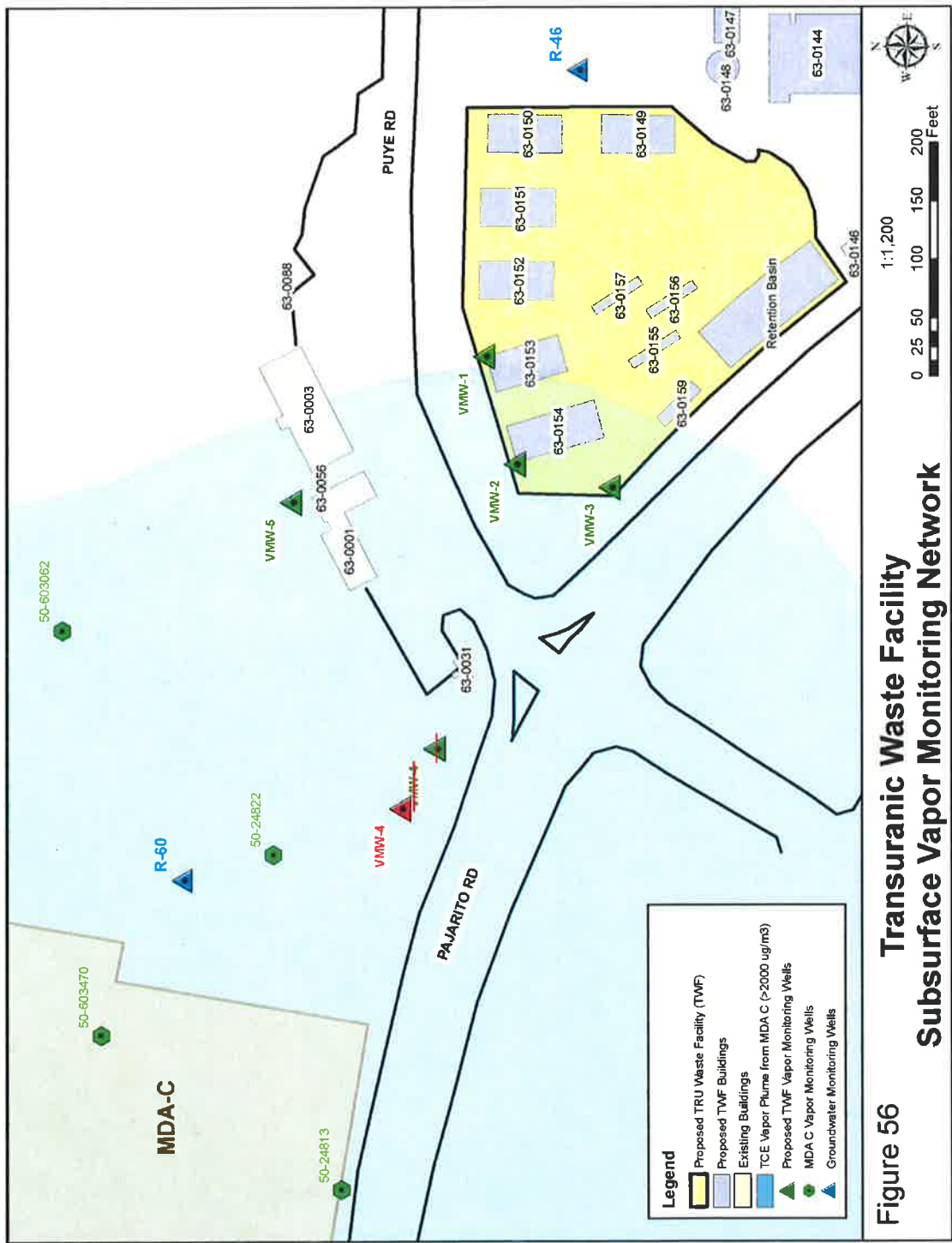


Figure 2: Permit Attachment N, Figures, Figure 56, VMW-4 Location Edit

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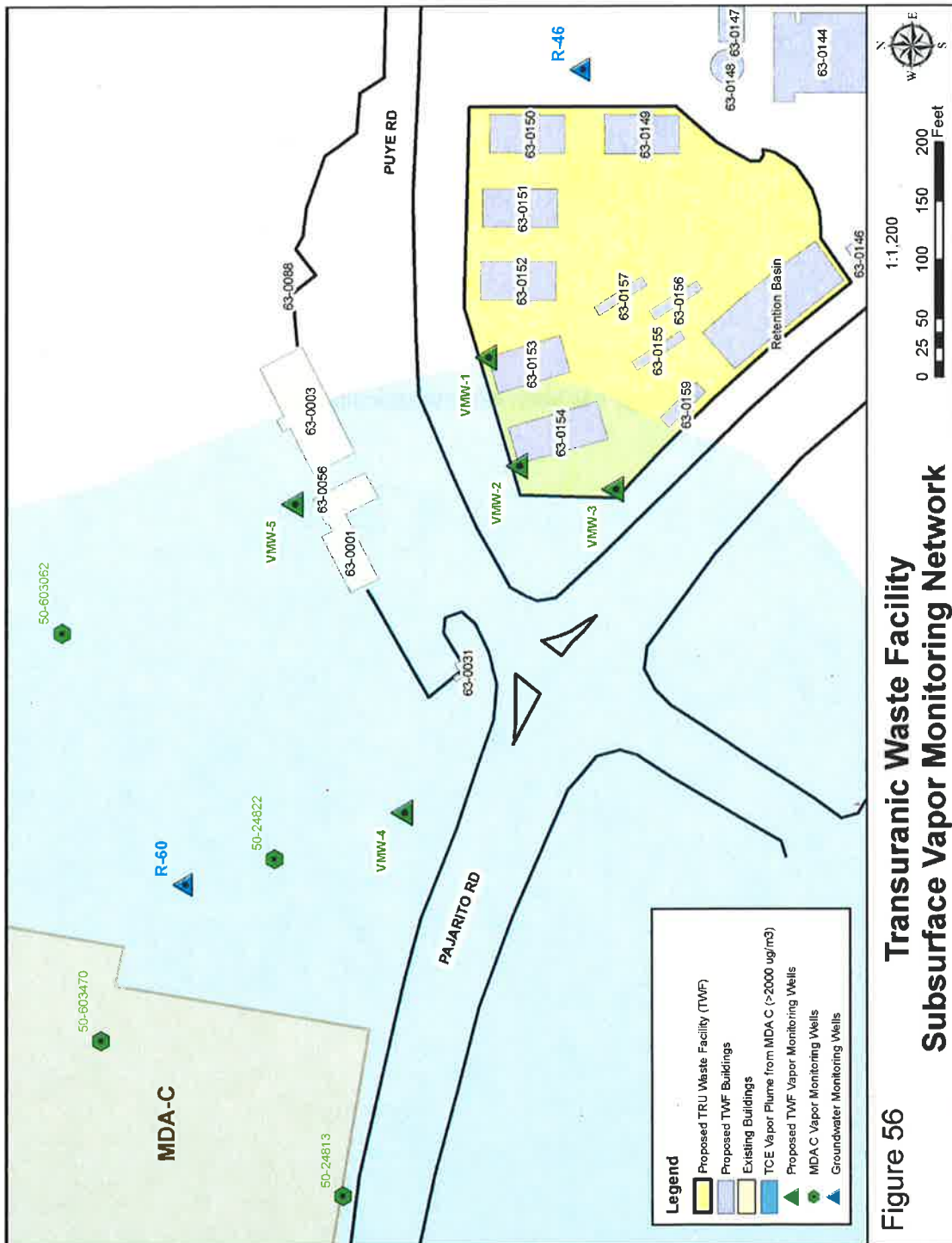


Figure 56

Transuranic Waste Facility Subsurface Vapor Monitoring Network

Figure 3: Permit Attachment N, Figures, Figure 56, VMW-4 Location Revision

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Attachment 10

Unit Designations Text Changes

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TABLE D-5
TA-63 Transuranic Waste Facility
Emergency Equipment

FIRE CONTROL EQUIPMENT

ABC and/or BC rated fire extinguishers are available at ~~TA-63-145~~, TA-63-0149, TA-63-0150, TA-63-0151, TA-63-0152, TA-63-0153, TA-63-0154, TA-63-0155, TA-63-0156, and TA-63-0157.

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) must be alerted.

Flame or smoke detection equipment and fire alarm pull stations are located within structures at TA-63-0149, TA-63-0150, TA-63-0151, TA-63-0152, TA-63-0153, and TA-63-0154.

Dry-pipe fire suppression systems are available at TA-63-0149, TA-63-0150, TA-63-0151, TA-63-0152, TA-63-0153, and TA-63-0154.

Fire alarm pull stations are available at ~~TA-63-145~~, TA-63-0149, TA-63-0150, TA-63-0151, TA-63-0152, TA-63-0153, TA-63-0154, TA-63-0155, TA-63-0156, and TA-63-0157.

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.

Two fire hydrants are located in TWF. These fire hydrants 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-63-145~~, TA-63-0149, TA-63-0150, TA-63-0151, TA-63-0152, TA-63-0153, TA-63-0154, TA-63-0155, TA-63-0156, and TA-63-0157. Each spill kit generally includes bags of absorbent and an inventory of tools and supplies.

Unit Identifier	Process Codes	Operating Capacity	General Information	Type of Unit
			190 Total square footage – 11,100	
TA-63 Transuranic Waste Facility	S01	105,875 gal	Includes TA-63-0149 through 0153 Storage Buildings, TA-63-0154 Storage and Characterization Building, TA-63-0155 through 0157 Characterization Trailers, and Outside Storage Pad	Outdoor (not associated with a regulated unit)

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Attachment 11

Receiving Canopy Text Deletion

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TABLE D-5
TA-63 Transuranic Waste Facility
Emergency Equipment

FIRE CONTROL EQUIPMENT

ABC and/or BC rated fire extinguishers are available at ~~TA-63-145~~, TA-63-0149, TA-63-0150, TA-63-0151, TA-63-0152, TA-63-0153, TA-63-0154, TA-63-0155, TA-63-0156, and TA-63-0157.

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) must be alerted.

Flame or smoke detection equipment and fire alarm pull stations are located within structures at TA-63-0149, TA-63-0150, TA-63-0151, TA-63-0152, TA-63-0153, and TA-63-0154.

Dry-pipe fire suppression systems are available at TA-63-0149, TA-63-0150, TA-63-0151, TA-63-0152, TA-63-0153, and TA-63-0154.

Fire alarm pull stations are available at ~~TA-63-145~~, TA-63-0149, TA-63-0150, TA-63-0151, TA-63-0152, TA-63-0153, TA-63-0154, TA-63-0155, TA-63-0156, and TA-63-0157.

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.

Two fire hydrants are located in TWF. These fire hydrants 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-63-145~~, TA-63-0149, TA-63-0150, TA-63-0151, TA-63-0152, TA-63-0153, TA-63-0154, TA-63-0155, TA-63-0156, and TA-63-0157. Each spill kit generally includes bags of absorbent and an inventory of tools and supplies.

COMMUNICATION EQUIPMENT

Telephones and the public address system are located inside the Operations Support Building.

Description of General Capabilities:

- | Telephones and portable 2-way radios for internal and external communication are available for use by any employee. Employees can be notified of an emergency situation and appropriate response action through the public address system.
- | Fire alarm pull stations are located in the storage buildings, ~~the receiving canopy~~, and at operations support building.

Description of General Capabilities:

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

Fire and public address system alarms

Description of General Capabilities:

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

DECONTAMINATION EQUIPMENT

- | Eyewash/emergency shower stations are available at TA-63-0149, TA-063-0150, TA-63-0151, TA-63-0152, TA-63-0153, and TA-63-0154. ~~and~~-SDSs are available in the ~~storage buildings and the~~ Operation Support Building. SDS information is maintained where appropriate for personnel accessibility and are used for chemicals that will be needed to support operations or emergency activities.

Description of General Capabilities:

Eyewashes and emergency showers may be used by personnel who receive a chemical splash to the eyes or body. Specific SDSs should be reviewed prior to working with chemicals.

PERSONAL PROTECTIVE EQUIPMENT

Personnel at TWF are required to use appropriate personal protective equipment (PPE) protect themselves from hazards found under normal conditions. This PPE may include gloves, steel toe shoes, and eye protection, additional PPE may be required during unusual hazardous situations. First aid kits and hearing protection are also available.

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Attachment 12

Decontamination Equipment Specification

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COMMUNICATION EQUIPMENT

Telephones and the public address system are located inside the Operations Support Building.

Description of General Capabilities:

- | Telephones and portable 2-way radios for internal and external communication are available for use by any employee. Employees can be notified of an emergency situation and appropriate response action through the public address system.
- | Fire alarm pull stations are located in the storage buildings, ~~the receiving canopy~~, and at operations support building.

Description of General Capabilities:

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

Fire and public address system alarms

Description of General Capabilities:

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

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- | Eyewash/emergency shower stations are available at TA-63-0149, TA-063-0150, TA-63-0151, TA-63-0152, TA-63-0153, and TA-63-0154. and SDSs are available in the ~~storage buildings and the~~ Operation Support Building. SDS information is maintained where appropriate for personnel accessibility and are used for chemicals that will be needed to support operations or emergency activities.

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Eyewashes and emergency showers may be used by personnel who receive a chemical splash to the eyes or body. Specific SDSs should be reviewed prior to working with chemicals.

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Attachment 13
Certification

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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.



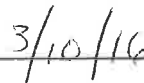
John P. McCann
Acting Division Leader
Environmental Protection Division
Los Alamos National Laboratory
Operator



Date Signed



Kimberly Davis Lebak
Manager
Los Alamos Field Office
U.S. Department of Energy



Date Signed