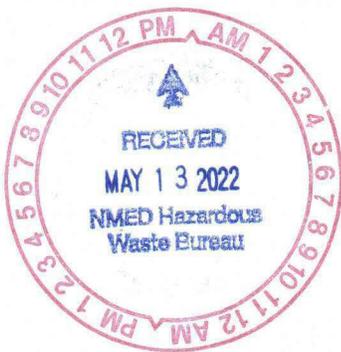




**N3B-Los Alamos**  
1200 Trinity Drive, Suite 150  
Los Alamos, New Mexico 87544  
(505) 257-7690



**Environmental Management**  
Los Alamos Field Office  
1200 Trinity Drive, Suite 400  
Los Alamos, New Mexico 87544  
(240) 562-1122

*Date:* May 13, 2022  
*Refer To:* N3B-2022-0135

Rick Shean, Chief  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505-6313

**Subject: Class 1 Permit Modification Request to Add a New Real-Time Radiography Unit at Technical Area 54, Area G, Pad 10 for the Los Alamos National Laboratory Hazardous Waste Facility Permit, EPA ID No. NM0890010515**

Dear Mr. Shean:

Enclosed is a Class 1 permit modification request to modify the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (the Permit) issued to the U.S. Department of Energy (DOE); Triad National Security, LLC; and Newport News Nuclear BWXT-Los Alamos, LLC (N3B) (the Permittees). The Permittees request to modify figures and text to add a new real-time radiography (RTR) unit at Technical Area 54 (TA-54), Area G, Pad 10. The enclosed permit modification provides proposed minor revisions to text and figures in Attachments A, G.11, and N.

This proposed permit modification request is required under 40 Code of Federal Regulations (CFR) Section 270.42, Appendix I, Classification of Permit Modification, item A.1., Administrative and Informational Changes, in accordance with Permit Section 3.1(3). The Permittees are making administrative changes (i.e., updates to figures and minor text changes) to add a new RTR unit at TA-54, Area G, Pad 10 and make a correction to Figure 27.

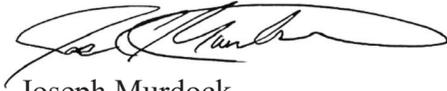
The changes described in the request do not substantially alter the permitted container storage requirements or facility and only update figures to show the location of the RTR unit, make a correction to Figure 27 to show the dome designations (Domes 283 and 153) on Pad 6, and make minor revisions to text describing the new RTR unit.

The Permittees' Class 1 permit modification consists of this letter and an enclosure containing a description of the permit modification, text edits of the Permit sections (Attachments A and G.11), the revised figures, and a signed certification page. This modification has been prepared in accordance with 40 CFR 270.42(a)(1). A notification of this permit modification will be sent to the New Mexico Environment Department–Hazardous Waste Bureau– (NMED-HWB-) maintained

LANL facility mailing list in accordance with 40 CFR 270.42(a)(1)(ii) within 90 days of incorporation of this permit modification.

If you have questions, please contact Emily Day at (505) 695-4243 (emily.day@em-la.doe.gov) or Arturo Duran at (575) 373-5966 (arturo.duran@em.doe.gov).

Sincerely,



Joseph Murdock  
Program Manager  
Environment, Safety and Health  
N3B-Los Alamos

Sincerely,

ARTURO DURAN  Digitally signed by ARTURO  
DURAN  
Date: 2022.05.12 11:09:37 -06'00'

Arturo Q. Duran, Compliance and Permitting Manager  
Office of Quality and Regulatory Compliance  
U.S. Department of Energy  
Environmental Management  
Los Alamos Field Office

Enclosure(s): Three hard copies with electronic files:

1. Class 1 Permit Modification Request to Add a New Real-Time Radiography Unit at Technical Area 54, Area G, Pad 10 for Los Alamos National Laboratory Hazardous Waste Facility Permit, EPA ID No. NM0890010515 (EM2022-0228)

cc (letter and enclosure[s] emailed):

Laurie King, EPA Region 6, Dallas, TX  
Steve Yanicak, NMED-DOE-OB  
Siona Briley, NMED-HWB  
Neelam Dhawan, NMED-HWB  
Mitchell Schatz, NMED-HWB  
Chris Catechis, NMED- RPD  
Karen Armijo, NA-LA  
Stephen Hoffman, NA-LA  
Adrienne Nash, NA-LA  
Gabriel Pugh, NA-LA  
Michael Hazen, LANL  
Jackie Hurtle, LANL  
Patrick L. Padilla, LANL  
Jennifer Payne, LANL  
M. Lee Bishop, EM-LA  
Jesse Kahler, EM-LA  
David Nickless, EM-LA  
Cheryl Rodriguez, EM-LA  
William Alexander, N3B  
Emily Day, N3B  
Ellen Gammon, N3B  
Jeff Holland, N3B  
Kim Lebak, N3B

Joseph Legare, N3B  
Dana Lindsay, N3B  
Pamela Maestas, N3B  
James Mobley, N3B  
Gerald O'Leary III, N3B  
Troy Thomson, N3B  
Jennifer von Rohr, N3B  
[rcra-prr@lanl.gov](mailto:rcra-prr@lanl.gov)  
[emla.docs@em.doe.gov](mailto:emla.docs@em.doe.gov)  
[n3brecords@em-la.doe.gov](mailto:n3brecords@em-la.doe.gov)  
Public Reading Room (EPRR and HPRR)  
PRS website

May 2022  
EM2022-0228

**Class 1 Permit Modification Request to  
Add a New Real-Time Radiography Unit  
at Technical Area 54, Area G, Pad 10 for  
Los Alamos National Laboratory  
Hazardous Waste Facility Permit,  
EPA ID No. NM0890010515**





Newport News Nuclear BWXT-Los Alamos, LLC (N3B), under the U.S. Department of Energy Office of Environmental Management Contract No. 89303318CEM000007 (the Los Alamos Legacy Cleanup Contract), has prepared this document. The public may copy and use this document without charge, provided that this notice and any statement of authorship are reproduced on all copies.

**CERTIFICATION**

**NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC**

**Class 1 Permit Modification Request to Add a New Real-Time Radiography Unit at  
Technical Area 54, Area G, Pad 10 for Los Alamos National Laboratory  
Hazardous Waste Facility Permit, EPA ID No. NM0890010515**

**C E R T I F I C A T I O N   S T A T E M E N T   O F   A U T H O R I Z A T I O N**

---

In accordance with the New Mexico Administrative Code Title 20, Chapter 4, Part 1 (incorporating the Code of Federal Regulations, Title 40 CFR § 270.11):

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to 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.”



---

Joseph Murdock, Program Manager  
Environment, Safety and Health  
Newport News Nuclear BWXT-Los Alamos, LLC

---

May 5, 2022

Date

**ARTURO  
DURAN**

Digitally signed by ARTURO  
DURAN  
Date: 2022.05.12 11:10:10 -06'00'

---

Arturo Q. Duran, Permitting and Compliance Manager  
U.S. Department of Energy  
Office of Quality and Regulatory Compliance  
Environmental Management  
Los Alamos Field Office

---

Date



**CONTENTS**

**1.0 INTRODUCTION ..... 1**

**2.0 BACKGROUND ..... 1**

**3.0 PERMIT MODIFICATION BASIS ..... 1**

**4.0 DESCRIPTION ..... 1**

**Appendices**

- Appendix A Redline Pages of Hazardous Waste Facility Permit, Attachment A and Attachment G.11
- Appendix B Replacement Figures for Hazardous Waste Facility Permit, Attachment G.11, Figure G.11-1, and Attachment N, Figures 27 and 31
- Appendix C Microsoft Word Files of Revised Hazardous Waste Facility Permit, Attachment A and Attachment G.11 (on CD included with this document)



## 1.0 INTRODUCTION

This document requests a Class 1 permit modification to the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (Permit) issued to the U.S. Department of Energy (DOE), Triad National Security, LLC; and Newport News Nuclear BWXT-Los Alamos, LLC (N3B), collectively the Permittees.

The U.S. Environmental Protection Agency (EPA) ID number for this facility is NM0890010515. This Class 1 permit modification request has been prepared in accordance with 40 Code of Federal Regulations (CFR) 270.42(a)(2), Appendix I, Item A.1. Item A.1 in 40 CFR 270.42(a)(2), Appendix I, allows for administrative and informational changes to be made to the Permit. The Permittees are making administrative changes (i.e., updates to figures and minor text changes) to add a new real-time radiography (RTR) unit at TA-54, Area G, Pad 10, and make a correction to Figure 27.

## 2.0 BACKGROUND

The Permittees are installing a new RTR unit at Technical Area 54 (TA-54) Area G, Pad 10. The RTR unit will be used to support waste management operations at Pad 10. Additionally, the Permittees are revising Figure 27 to make a correction to the Dome designations (Domes 283 and 153) on Pad 6.

## 3.0 PERMIT MODIFICATION BASIS

This permit modification is required under 40 CFR 270.42(a)(1) and 40 CFR 270.42, Appendix I, "Classification of Permit Modification," item A.1., Administrative and Informational Changes, in accordance with Permit Section 3.1(3). The Permittees are adding a new RTR unit to Pad 10, a permitted hazardous waste management unit in TA-54, Area G that will be used to support waste management operations. Additionally, the Permittees are revising Figure 27 to make a correction to the dome designations (Domes 283 and 153) on Pad 6.

## 4.0 DESCRIPTION

This permit modification request proposes changes to a permitted unit at TA-54, Area G, Pad 10. All proposed changes are shown in redline-strikeout format for proposed revisions to text in the following Permit attachments:

- Attachment A, Technical Area (TA) - Unit Descriptions (changes shown in redline). Adding language to Section A.4.2.4 describing the new RTR unit at Pad 10.
- Attachment G.11, Technical Area 54, Area G, Pad 10, Outdoor Container Storage (changes shown in redline). This attachment also includes the revised Figure G.11-1.
- Revised Figures (Attachment N, Figure 27, Figure 31, and Figure G.11-1). Figure 27 was revised to show the new RTR unit on Pad 10 and to make a correction to the dome designations (Domes 283 and 153) on Pad 6. Figures 31 and G.11-1 were revised to show the location of the new RTR unit on Pad 10.

Appendix A contains redline text changes to Permit Attachments A and G.11. Appendix B contains the replacement figures. Microsoft Word files of the proposed permit revisions are included on CD as Appendix C.

No other revisions to the permit are necessary as a result of this permit modification request.



## **Appendix A**

---

*Redline Pages of Hazardous Waste Facility Permit,  
Attachment A and Attachment G.11*



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



repackaging. The transuranic waste characterization facilities include the following: drum-loading or receiving unit(s); equilibration units(s); gas mobile characterization unit(s); and mobile repack units. External containment is provided by the trailers and transportainers because waste characterization activities take place inside the structures. Activities at Pad 10 include the following:

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

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

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

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

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

Heated transportainer for transuranic and mixed transuranic waste storage prior to characterization

#### **TA 54-0546, Storage**

Heated transportainer for transuranic and mixed transuranic waste storage prior to characterization

#### **TA-54-0609, Real-Time Radiography unit**

The Real-Time Radiography (RTR) unit is mounted on a flatbed trailer 52 feet in length by 9 feet wide. Radiography is a non-destructive examination (NDE) technique used to examine waste containers. The NDE equipment in the RTR unit is designed to provide X-ray examination of the contents of TRU waste containers, including drums and standard waste boxes, to verify their physical form and to detect items prohibited for WIPP disposal. The RTR unit will support the Facility's waste management and CCP operations at Pad 10.

#### **Pad 10 asphalt**

Pad 10 is primarily used for storage of feed stock and empty drums for the transuranic waste characterization activities. Additionally, storage of oversized mixed wastes in transportainers and metal boxes can occur on the pad.



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



The SuperHENC will support the Facility's Transuranic Waste Characterization Project and Central Characterization Project operations beginning in 2010.

**TA-54-0545 and -0546, Storage trailers** - Heated transportainers used for waste container storage and equilibration prior to characterization.

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

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

**TA-54-0365, Office Building, Formerly MTGS** - TA54-0365 formerly housed the MTGS. The MTGS was a gamma assay system prototype developed by the Permittees. The instrument was salvaged in 2007 and the trailer was converted to office space.

**TA-54-0483, Source Storage Trailer** - TA54-0483 serves as a storage area for calibration sources needed by the NDA systems.

#### **TA-54-0609, Real-Time Radiography unit**

The Real-Time Radiography (RTR) unit is mounted on a flatbed trailer 52 feet in length by 9 feet wide. Radiography is a non-destructive examination (NDE) technique used to examine waste containers. The NDE equipment in the RTR unit is designed to provide X-ray examination of the contents of TRU waste containers, including drums and standard waste boxes, to verify their physical form and to detect items prohibited for WIPP disposal. The RTR unit will support the Facility's waste management and CCP operations at Pad 10.

Additional support structures, TA54-484 and two storage trailers, server as storage for supplies and equipment.

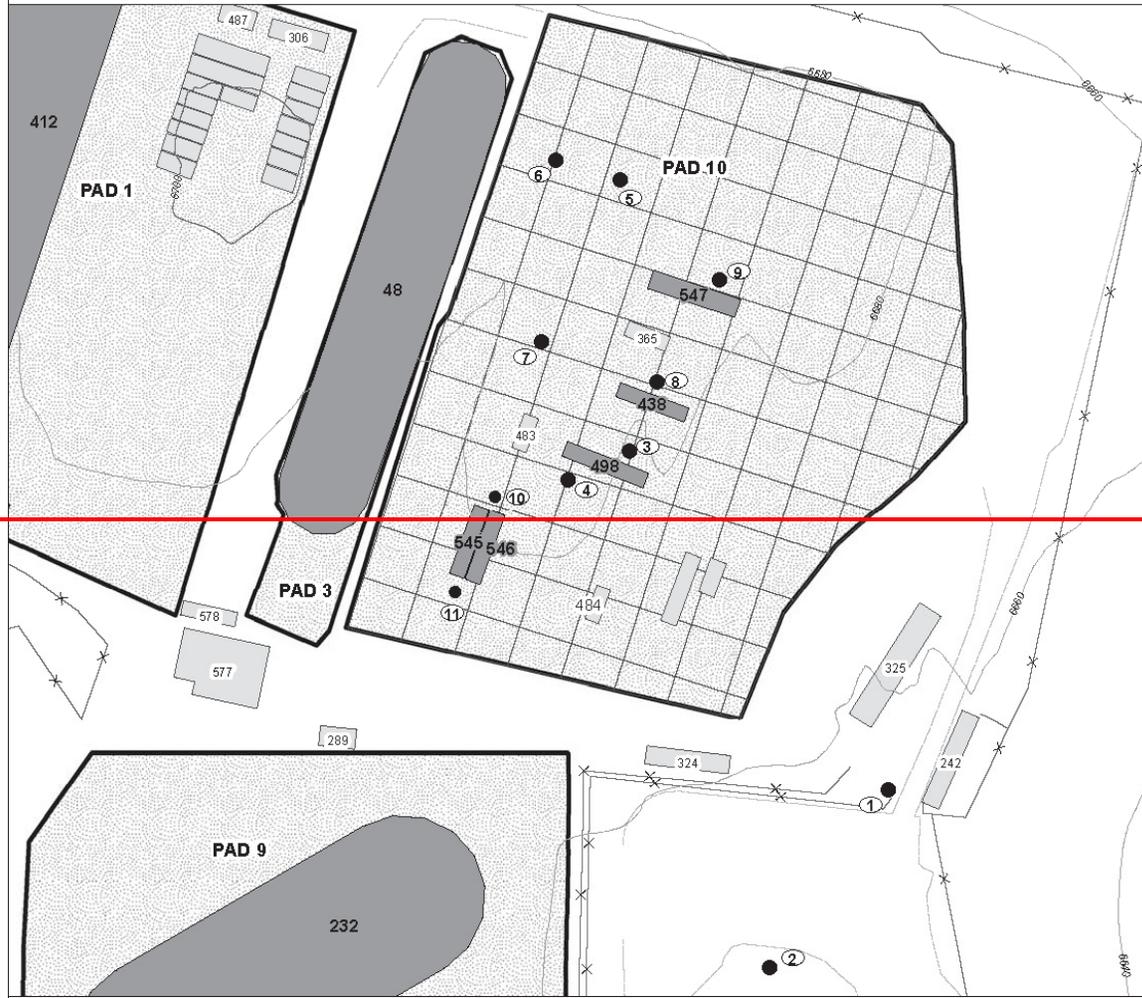
The permitted unit has been used for the storage of mixed waste in solid form with small quantities of liquid form waste since 2004. The hazardous waste stored at the permitted unit has been: solidified inorganic solids; leached process residues; salts and cement paste; ash; dewatered aqueous sludge;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

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

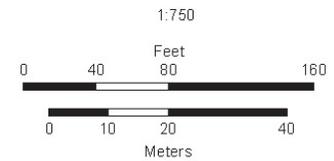
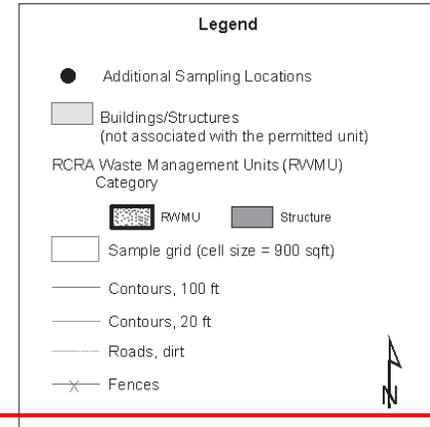
**Table G.11-6**

**List of Equipment at the Technical Area 54, Area G, Pad 10 Outdoor Container Storage Unit**

<b>Equipment</b>	<b>Decontamination</b>	<b>Disposal</b>
Characterization trailers / waste staging equipment (turntables, conveyors)	X	
Any storage structures on Pad 10	X	
Equipment and cabinets	X	X
Container pallets	X	X
Communication equipment	X	X
Access barriers and chains	X	X
Electrical support infrastructure		X



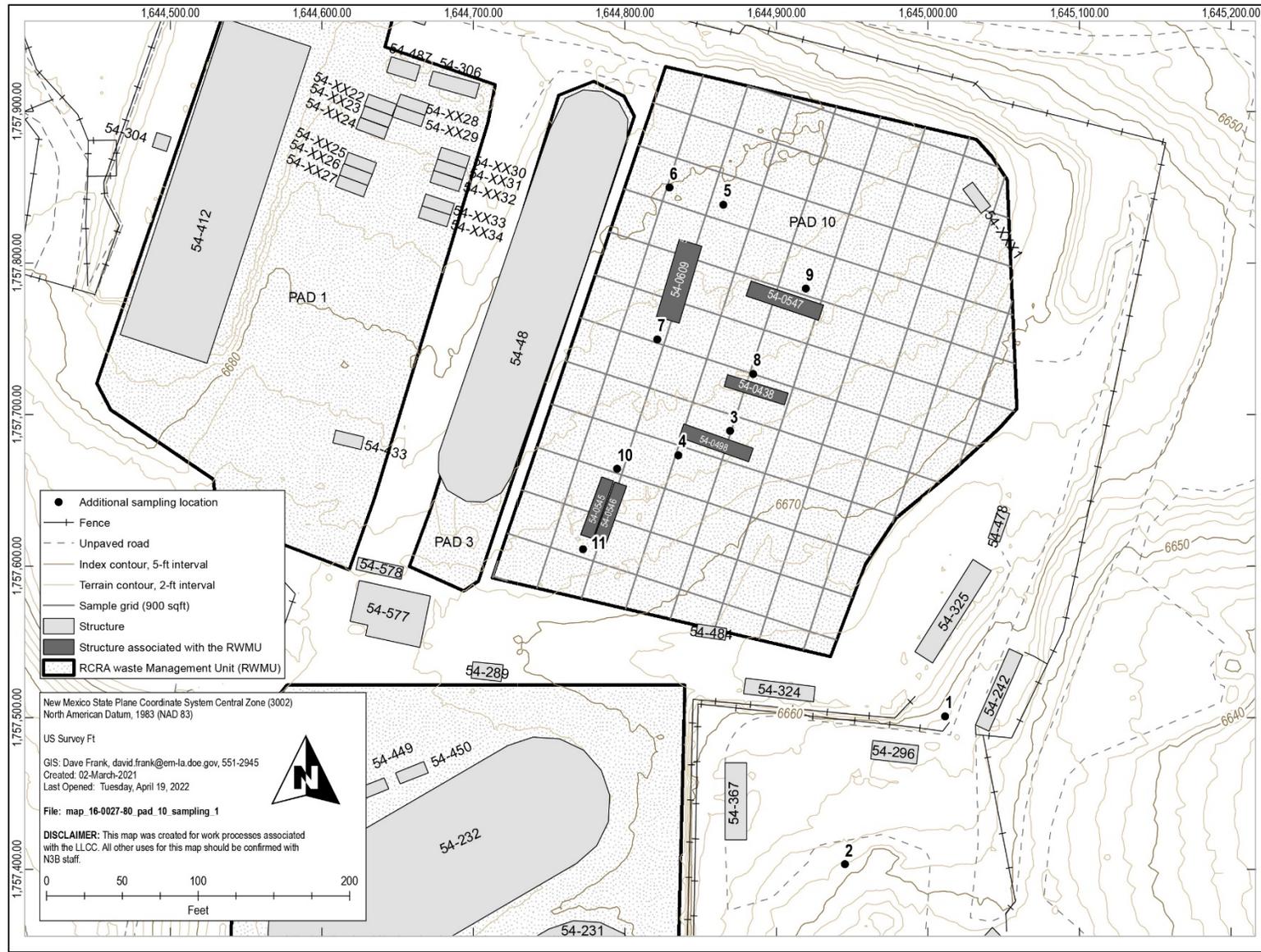
Permitted Unit Soil Sampling Grid



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

Map Produced by Ben Sutter, ADBI-SI  
 Date: March 20, 2017  
 Map Number 17-0020-02-Pad10.

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



G.11-1: Technical Area 54, Area G, Pad 10 Outdoor Container Storage Unit Sampling Grid and Additional Sampling Locations

## **Appendix B**

---

*Replacement Figures for Hazardous Waste  
Facility Permit, Attachment G.11, Figure G.11-1,  
and Attachment N, Figures 27 and 31*



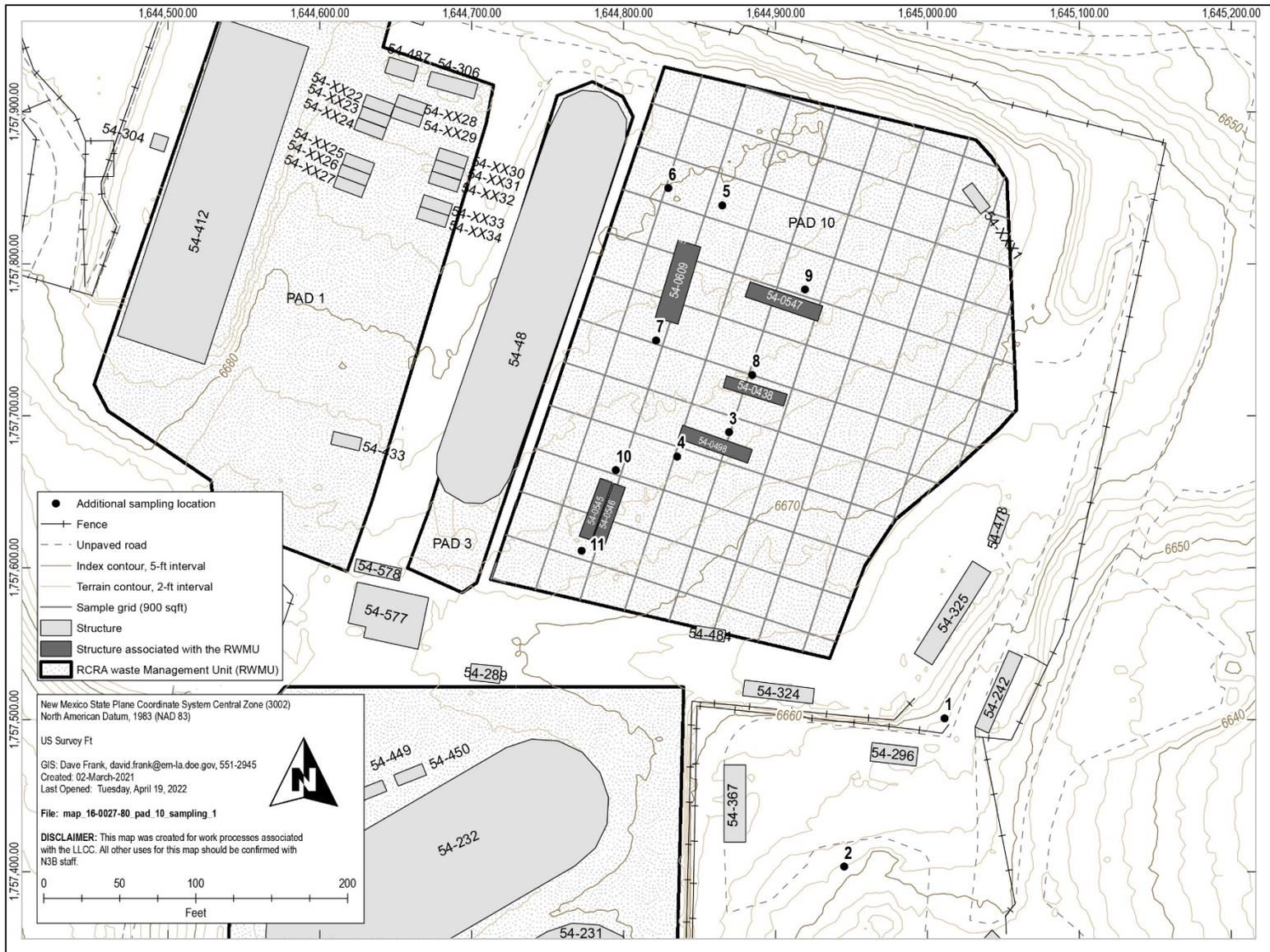
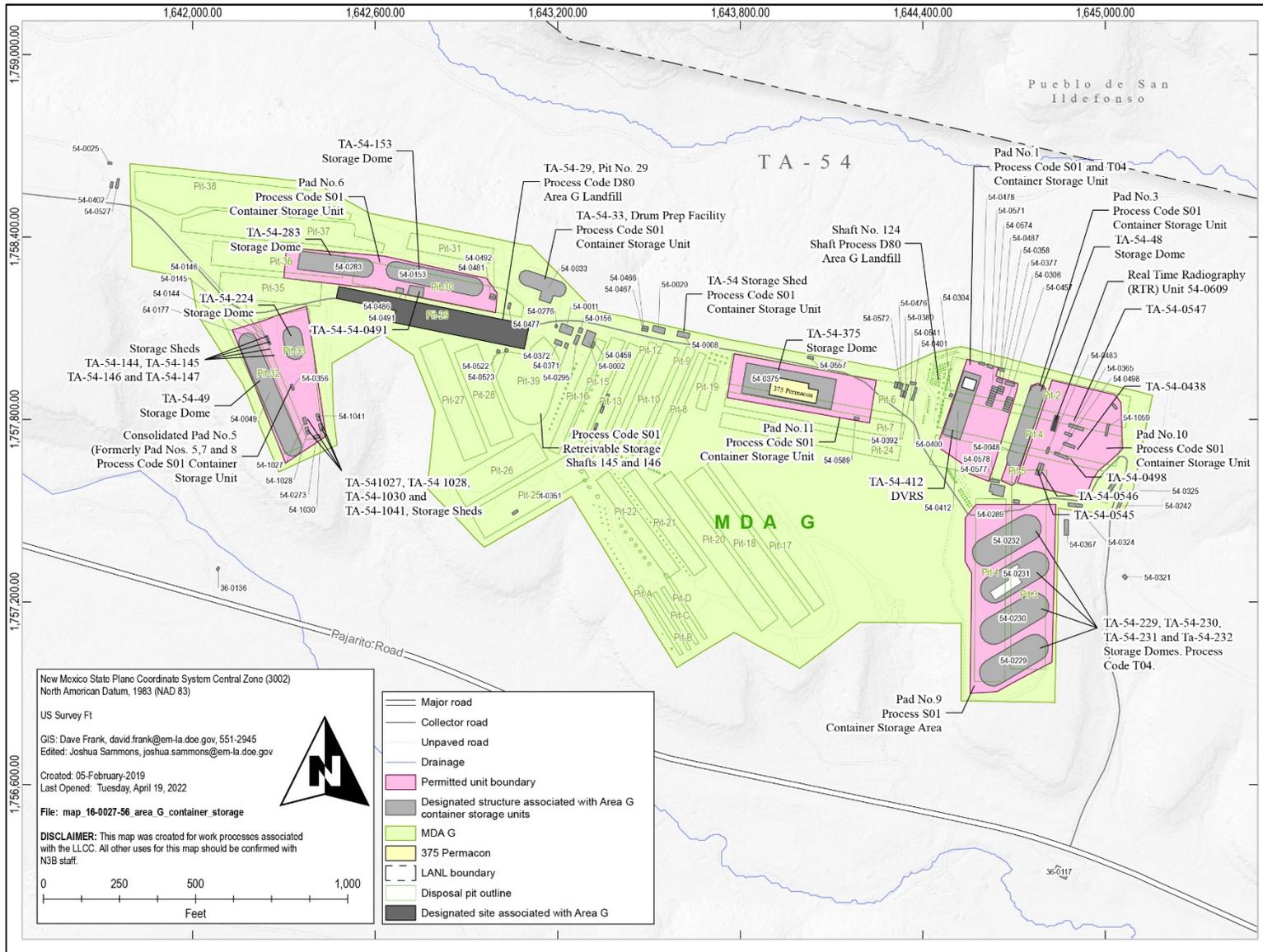


Figure G.11-1 TA-54, Area G, Pad 10 Outdoor Container Storage Unit Sampling Grid and Additional Sampling Locations



**Figure 27 TA-54, Area G, Container Storage and Treatment Units**





## **Appendix C**

---

*Microsoft Word Files of Revised Hazardous Waste Facility  
Permit, Attachment A and Attachment G.11  
(on CD included with this document)*

