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Environmental Management
Los Alamos Field Office
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(240) 562-1122

Date: August 21, 2024
Refer To: N3B-2024-0263

Mr. JohnDavid Nance, Hazardous Waste Bureau Chief
Designated Agency Manager
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6313

Subject: Class 1 Permit Modification Request for Administrative Changes at Technical Area 54, Area G, Pad 9, of the Los Alamos National Laboratory Hazardous Waste Facility Permit, EPA ID No. NM0890010515

Dear Mr. Nance:

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 conex box (i.e., transportainer) for nonhazardous waste storage at Technical Area 54 (TA-54), Area G, Pad 9.

The enclosed permit modification provides proposed minor administrative revisions to text and figures in Attachments A, G.10, 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.l., Administrative and Informational Changes, and 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 conex box at TA-54, Area G, Pad 9. As in previous Class 1 permit modifications, and in accordance with Permit Section 3.1(3), "[a]ny change to the location of a building or structure within which hazardous waste has not been managed shall be a Class 1 modification without prior approval (see 40 CFR § 270.42(a)(l))." The conex box (e.g., transportainer) to be used at Pad 9 is a new structure and is not intended to manage hazardous waste.

Changes described in this request do not substantially alter the permitted container storage requirements or facility. Changes include updated figures to show the location of the conex box, and minor revisions to text describing the new conex box.

The Permittees' Class 1 permit modification consists of this letter and an enclosure containing a description of the permit modification, text edits of the relevant Permit sections (Attachments A and

G.10), the revised figures, and a signed certification page. This modification has been prepared in accordance with 40 CFR 270.42(a)(l). A notification of this permit modification will be sent to the New Mexico Environment Department Hazardous Waste Bureau–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 Christian Maupin at (505) 695-4281 (christian.maupin@em-la.doe.gov) or Arturo Duran at (575) 373-5966 (arturo.duran@em.doe.gov).

Sincerely,

Robert E. Edwards III

Robert Edwards *III*
Program Manager
Environment, Safety, Health and Quality
N3B-Los Alamos

Sincerely,

ARTURO DURAN

Digitally signed by ARTURO DURAN
Date: 2024.08.19 16:28:57 -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 for Administrative Changes at Technical Area 54, Area G, Pad 9, of the Los Alamos National Laboratory Hazardous Waste Facility Permit, EPA ID No. NM0890010515 (EM2024-0362)

cc (letter and enclosure[s] emailed):
Laurie King, EPA Region 6, Dallas, TX
Steve Yanicak, NMED-DOE-OB
Ricardo Maestas, NMED-HWB
Siona Briley, NMED-HWB
Neelam Dhawan, NMED-HWB
Caitlin Martinez, NMED-HWB
Aaron Coffman, NMED-HWB
Rick Shean, NMED-RPD
Karen Armijo, NA-LA
Stephen Hoffman, NA-LA
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Public Reading Room (EPRR and HPRR)
PRS website

August 2024
EM2024-0421

Class 1 Permit Modification Request for Administrative Changes at Technical Area 54, Area G, Pad 9, of the Los Alamos National Laboratory Hazardous Waste Facility Permit, EPA ID No. NM0890010515

N3B Los Alamos

CERTIFICATION

NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC

Class 1 Permit Modification Request for Administrative Changes at Technical Area 54, Area G, Pad 9, of the Los Alamos National Laboratory Hazardous Waste Facility Permit, EPA ID No. NM0890010515

CERTIFICATION STATEMENT OF AUTHORIZATION

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."

Robert E Edwards III — August 6, 2024

Robert Edwards III, Program Manager — Date
Environment, Safety, Health and Quality
Newport News Nuclear BWXT-Los Alamos, LLC

ARTURO DURAN — Digitally signed by ARTURO DURAN Date: 2024.08.19 16:29:29 -06'00' — August 19, 2024

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

CONTENTS

Appendices

1.0 INTRODUCTION

This document requests a Class 1 permit modification to 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), 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)(1), Appendix I, Item A.1 and Permit Section 3.1(3). Item A.1 in 40 CFR 270.42(a)(1), 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 conex box (e.g., transportainer) at Pad 9, Technical Area (TA-54), Area G.

2.0 BACKGROUND

The Permittees are installing a conex box (54-0627) at TA-54, Area G, Pad 9. The conex box (e.g., transportainer) will be used to store radioactive calibration sources used for waste characterization activities. The conex box is approximately 20 ft long by 8 ft wide.

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 and in accordance with Permit Section 3.1(3). The Permittees are adding a conex box (54-0627) to Pad 9, a permitted hazardous waste management unit in TA-54, Area G, for storage of radioactive calibration sources used for waste characterization.

4.0 DESCRIPTION

This permit modification request proposes changes to the following permitted units at TA-54, Area G: Pad 9. All proposed changes are shown in redline-strikeout format for proposed revisions to text in the following Permit section and attachments:

- Attachment A, Technical Area (TA) - Unit Descriptions (changes shown in redline). Language was added to Section A.4.2.1 describing the conex box at Pad 9.
- Attachment G.10, Technical Area 54, Area G, Pad 9, Outdoor Container Storage and Treatment Unit Closure Plan (changes shown in redline). This attachment also includes the revised Figure G.10-1.
- Revised Figures (Attachment N, Figures 27 and 28 and Figure G.10-1). Figures 27, 28, and G.10-1 were revised to show the conex box at Pad 9.
- Appendix A contains redline text changes to Attachments A and G.10.
- 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 and Attachments A and G.10

ATTACHMENT A

TECHNICAL AREA (TA) - UNIT DESCRIPTIONS

A.4.2.1 Pad 9

The 4 to 6 in thick asphalt pad is approximately 570 feet long and 275 feet wide (*see* Figure 28 in Attachment N (*Figures)*). Transuranic Waste Inspectable Storage Project (TWISP) domes 229, 230, 231, and 232 are located on Pad 9 at the east end of Area G. Each dome is approximately 246 ft long~~, and 88 ft~~ by ~~7 inches~~89 feet wide by 35 feet high, and consists of a rigid aluminum frame that supports a tensioned membrane. A series of aluminum I-beam trusses spanning the width of the structures comprise the dome framework. The membrane material is a polyester fabric coated with UV-stabilized plasticized PVC. The material is fungus-resistant and fire-retardant (*i.e.*, self-extinguishing). The membrane is integrally connected to the frame to provide a fully tensioned fit. Each dome is equipped with personnel doors and a roll-up door for vehicle access and is anchored to a concrete ring-wall with anchor bolts. Under Pad 9 is a fire water collection system that collects water from Domes 232 and 231 and transports it to a sump system in Dome -229 at the south end of Pad 9. The system is not intended for, nor was it designed to provide, secondary containment of liquid waste releases. It was designed to provide an augmented fire water collection capability to prevent fire water running off the pad if any fire suppression activities exceeded the capacity contained in the upstream domes. Domes 231 and 232 have three drain inlets apiece in the southeast portion of the domes. The drains in each dome are connected and drain to a collection pipe-line that runs down the east side of Pad 9. The line terminates in the collection sump in the east end of Dome 229. The floor of Dome 230 is designed for secondary containment of liquids. The asphalt pad floor is sloped (1%) towards a concrete sump at the east end of the dome. The asphalt floor and curbs in Dome 230 are lined with a double layer of 40 mil high-density polyethylene (HDPE), and the sump is lined with a single layer of 40 mil HDPE, creating an impervious layer to contain any liquids that might accumulate. The secondary containment capacity for Dome 230, which includes the sump and curbed area, is approximately 48,255 gallons which exceeds the amount necessary to hold 10% of the total storage capacity of the dome (330,000 gallons). The TWISP domes on Pad 9 are unheated; the storage of waste within the transportainer is for the purpose of temperature equilibration of the waste for characterization procedures (*i.e.*, real-time radiography and headspace gas sampling associated with the transuranic waste characterization program). Additionally, there is a conex box (54-0627) southwest of Dome 229 used for storage of radioactive calibration sources used for waste characterization activities. The conex box is approximately 20 feet long by 8 feet wide.

Dome 231

The building is an aluminum A-frame truss design, anchored to a concrete ring wall. The dome is of modular construction using a membrane or fabric covering. It is equipped with personnel doors and two roll-up doors, each along the eastern and western ends of the dome. Inside the dome is a Perma-Con that is approximately 16 ft high by 68 ft long by 28 ft wide. A radiological buffer area (RBA) tent is attached to the Perma-Con's western side. The RBA tent is 16 ft high, 36 ft long and 28 ft wide. The Perma-Con is divided into three main areas; cell 1 and cell 2 are designated for sort, segregate, size reduction, and repackaging activities and a control room is located along the eastern-most side. The Perma-Con has six personnel doors between the cells; control room, the RBA, and the dome itself; one metal roll-up door between cell 1 and cell 2; and two plastic roll-up doors along the northern and eastern walls of

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

1.0 INTRODUCTION

This closure plan describes the activities necessary to close the outdoor hazardous waste container storage unit at Technical Area (TA)-54, Area G, Pad 9, and the storage/treatment unit at Dome 231 Perma-Con at the Los Alamos National Laboratory (Facility), hereinafter referred to as the permitted unit. The information provided in this closure plan addresses the closure requirements specified in Permit Part 9 and the Code of Federal Regulations (CFR), Title 40, Part 264, Subparts G and I for hazardous waste management units operated at the Facility under the Resource Conservation and Recovery Act (RCRA) and the New Mexico Hazardous Waste Act.

Until closure is complete and has been certified in accordance with Permit Section 9.5, a copy of the approved closure plan or the hazardous waste facility permit containing the plan, any approved revisions to the plan, and closure activity documentation associated with the closure will be on file with hazardous waste compliance personnel at the Facility and at the U.S. Department of Energy (DOE) Los Alamos Site Office. Prior to closure of the permitted unit, this closure plan may be amended in accordance with Permit Section 9.4.8 to provide updated sampling and analysis plans and to incorporate updated decontamination technologies. Amended closure plans shall be submitted to the New Mexico Environment Department (Department) for approval prior to implementing closure activities.

2.0 DESCRIPTION OF UNIT TO BE CLOSED

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

The permitted unit is comprised of an asphalt pad which is located in the eastern end of Area G. It was constructed in 1993, consists of a four to six inch layer of asphalt over the underlying base course overlying fill (minimum six inches of tuff), and measures 570 feet long and 275 feet wide, or approximately 158,000 square feet. It is constructed with curbing on the west and east sides and is sloped from 1% to 1.5% to the east and south-east for drainage. Rainwater flow is directed across the pad by the eastward slope and through small PVC drains spaced at 55 foot intervals in the curbing along the east side of the pad. The slope below the curbing is protected with rock and concrete. Concrete curbing also extends along the west and partially the south sides of the pad and ends at a concrete and rock drainage structure. The remainder of the south side of the pad is uncurbed. Four domes –(Domes 229, 230, 231, 232)~~,~~ and a conex box (54-0647) are situated on it (*see* Figure G.10-1).

The permitted storage unit has stored the following waste types: solidified inorganic solids; leached process residues; salts and cement paste; ash; dewatered aqueous sludge; chemical treatment sludge; soils; combustible debris (*e.g.*, plastics, rubber, laboratory trash, building debris); and heterogeneous debris. Permit Part 3 (*Storage in Containers*), Permit Attachment A (*Technical Area Unit Descriptions*), Permit Attachment B (*Part A Application*), and Permit Attachment C (*Waste Analysis Plan*) include information regarding waste management procedures and hazardous waste constituents stored at the permitted unit.

The permitted treatment process within the Perma-Con in Dome 231 was used to treat mixed transuranic waste (MTRU) from the S3000 waste matrix (homogenous solids) to deactivate the RCRA hazardous waste characteristics of ignitability (D001), corrosivity (D002), and reactivity (D003). Permit Attachment A (*Technical Area [TA] Unit Descriptions*), Permit Attachment B (*Part A Application)*, and Permit Attachment C (*Waste Analysis Plan*) include information regarding waste treatment practices and hazardous waste constituents treated at this permitted unit.

Within the enclosure of the Perma-Con unit, glove bags have been used to enclose a contaminated item and from a small work area to confine the spread of the contamination. Use of glove bags allowed work to be performed on potentially contaminated items, protect personnel, and to allow access to waste within the containment using gloved sleeves which enable repacking ore manipulations without directly contacting contaminated surfaces.

2.1 Permitted Unit Domes

The four storage domes at the permitted unit have been used for the storage of hazardous waste in both liquid and solid form since 1994. The domes (an aluminum framework of trusses covered with tension-fitted ultraviolet resistant, fire-retardant coated, polyester fabric) are 246 feet long by 89 feet wide and cover a surface area of approximately 20,400 square feet each. The base of each dome is secured with anchor bolts to a concrete ring wall that surrounds the interior floor perimeter and provides run-on and run-off protection. The ring wall is designed to retain any liquids that may accumulate within the domes. Each dome has several personnel doors around the perimeter of the dome and a larger vehicle access door and ramp on the west end.

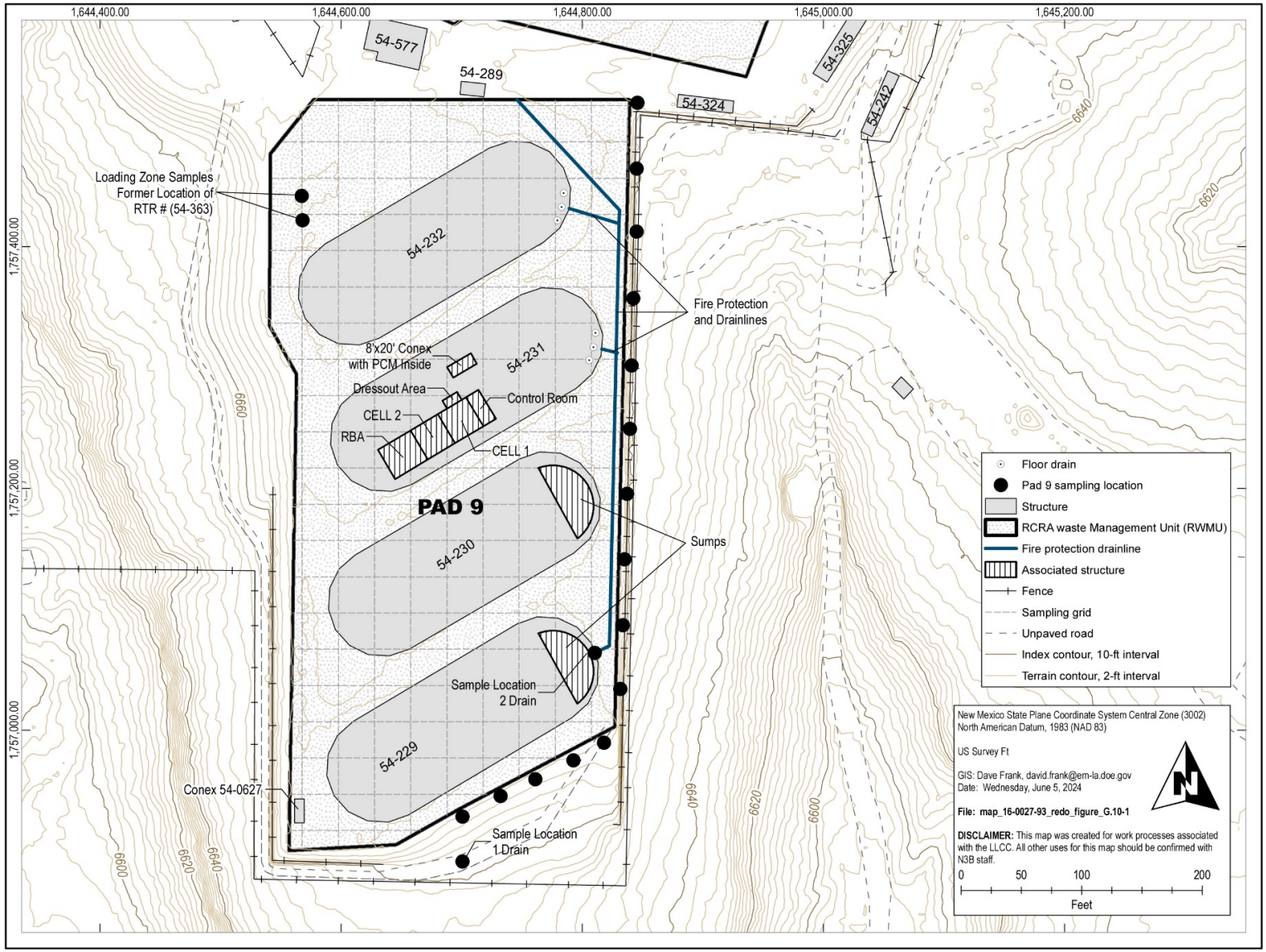
Dome 231 contains a Perma-Con® modular panel containment structure (68 feet long x 28 feet wide) used for the treatment of MTRU waste prior to shipment to the Waste Isolation Pilot Plant. Domes 229 and 232 have been used only for the storage of non-liquid hazardous waste and Dome 230 and 231 have been used for the storage of both liquid and non-liquid hazardous waste. Additionally, there is a conex box (54-0627) southwest of Dome 229, used only for ~~–~~storage of radioactive calibration sources used for waste characterization activities. ~~Hazardous waste will not be stored in (54-0627).~~ The conex box is approximately 20 feet long by 8 feet wide.

2.1.1 Domes 229, 231, and 232 Fire Water Collection System

The permitted unit has a fire water collection system that collects water from Domes 232, 231, and Dome 226 on Pad 1. The system was designed to provide an augmented fire water collection capability to limit run-off of fire suppression waters from the domes if the volume of water during a fire exceeded their collection capacity. Fire suppression water from the domes is collected via a pipeline that runs from Pad 1 and down the east side of the permitted unit below the asphalt. The pipeline is sloped to provide gravity flow. The southeast portions of Domes 231 and 232 have three drain inlets each and Dome 226 has two drain inlets on the south end that connect to this pipeline. The pipeline terminates in the concrete walled semi-circular collection sump (lined with high density polyethylene plastic) in the east end of Dome 229. The semi-circular sump, which measures 70 feet by 28 feet and 26 inches in depth, is not intended for secondary containment of liquid waste and has not been used as such based on review of the permitted unit's Operating Record.

2.1.2 Dome 230 Secondary Containment

Dome 230 has a concrete walled semi-circular sump (lined with high density polyethylene plastic) at the east end of the dome and double high density polyethylene layers under the pad that act as secondary containment for liquid waste. The design of the sump is similar to that of Dome 229 as described above except that the sump in Dome 230 is not connected to an external drain system. The maximum capacity of accumulated liquids within the concrete sump and the curbed area of the dome are approximately 48,000 gallons.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54-577
54-289
54-324
54-325
54-242
54-232
54-231
54-230
54-229
PAD 9
Loading Zone Samples
Former Location of
RTR # (54-363)
8'x20' Conex
with PCM inside
Dressout Area
Control Room
CELL 2
RBA
CELL 1
Fire Protection
and Drainlines
Sumps
Sample Location
2 Drain
Sample Location
1 Drain
Conex 54-0627
6600
6620
6640
Floor drain
Pad 9 sampling location
Structure
RCRA waste Management Unit (RWMU)
Fire protection drainline
Associated structure
Fence
Sampling grid
Unpaved road
Index contour, 10-ft interval
Terrain contour, 2-ft interval
New Mexico State Plane Coordinate System Central Zone (3002)
North American Datum, 1983 (NAD 83)
US Survey Ft
GIS: Dave Frank, david.frank@em-la.doe.gov
Date: Wednesday, June 5, 2024
File: map_16-0027-93_redo_figure_G.10-1
DISCLAIMER: This map was created for work processes associated with the LLCC. All other uses for this map should be confirmed with N3B staff.
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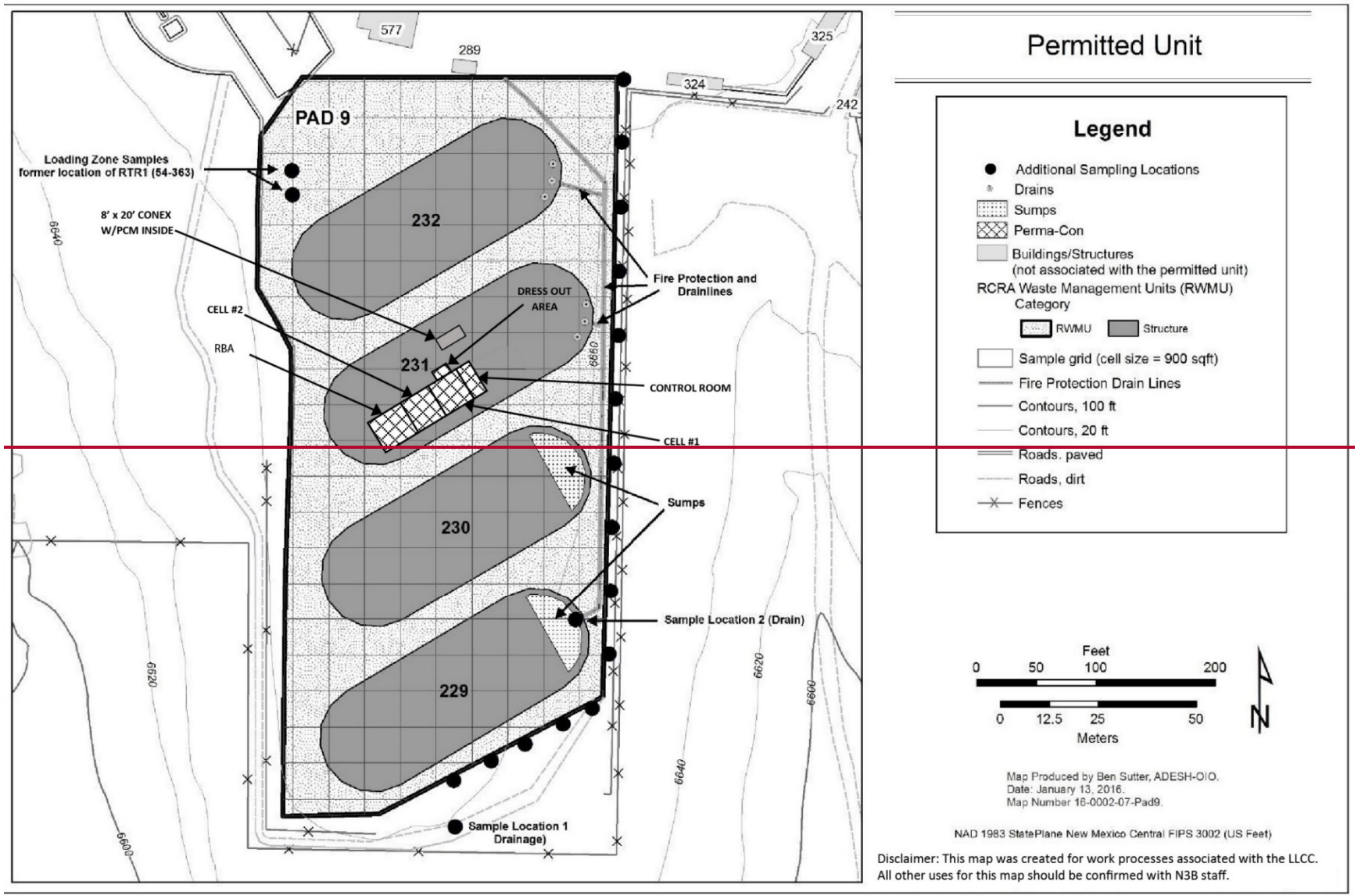

Figure G.10-1: Techincal Area G, Pad 9 Outdoor Container Storage/Treatment Unit Grid Sampling and Additional Sampling Locations

Appendix B

Replacement Figures for
Hazardous Waste Facility Permit, Attachment G.10,
Figure G.10-1, and Attachment N, Figures 27 and 28

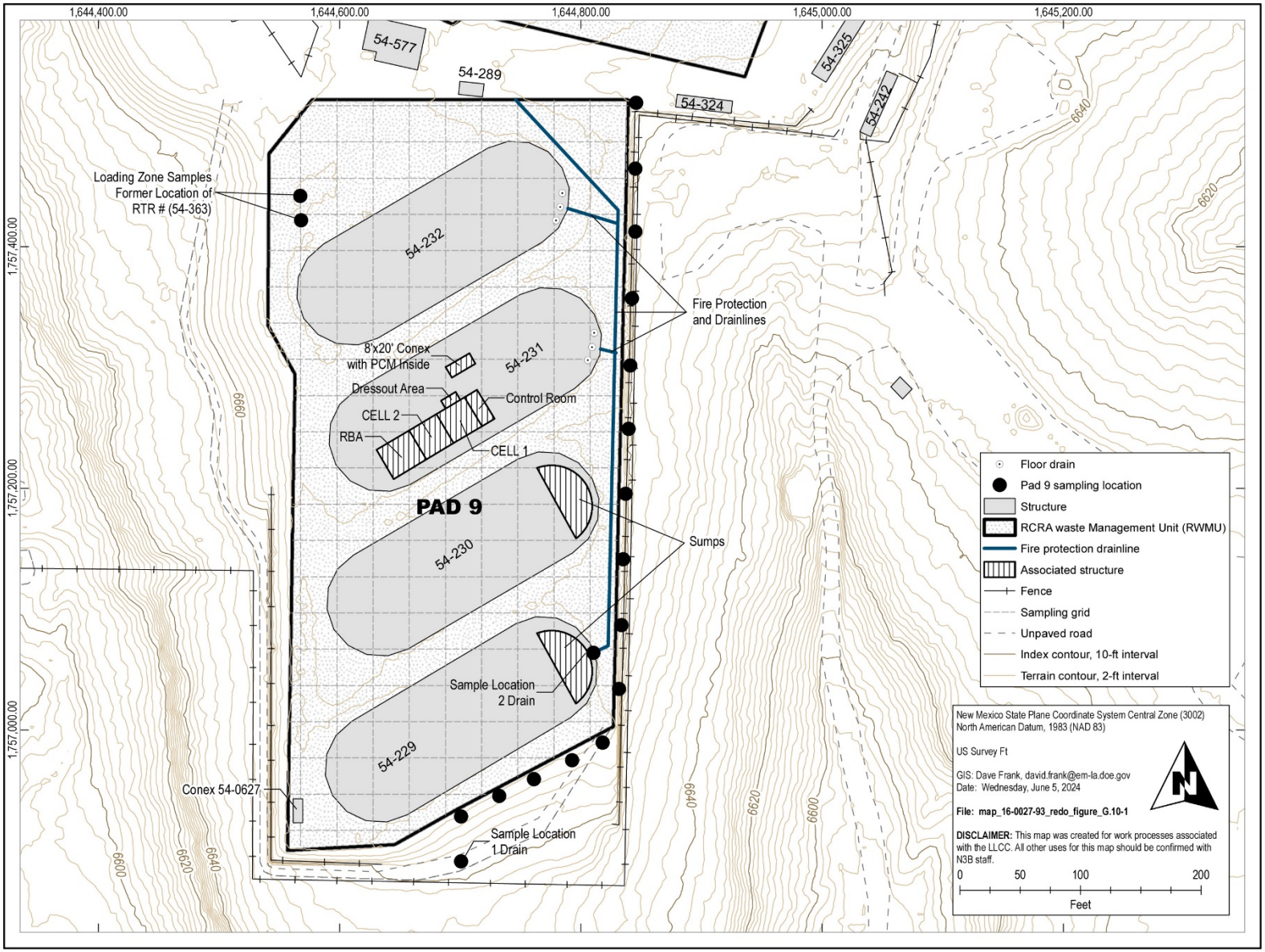

Figure G.10-1: Technical Area G, Pad 9 Outdoor Container Storage/Treatment Unit Grid Sampling and Additional Sampling Locations

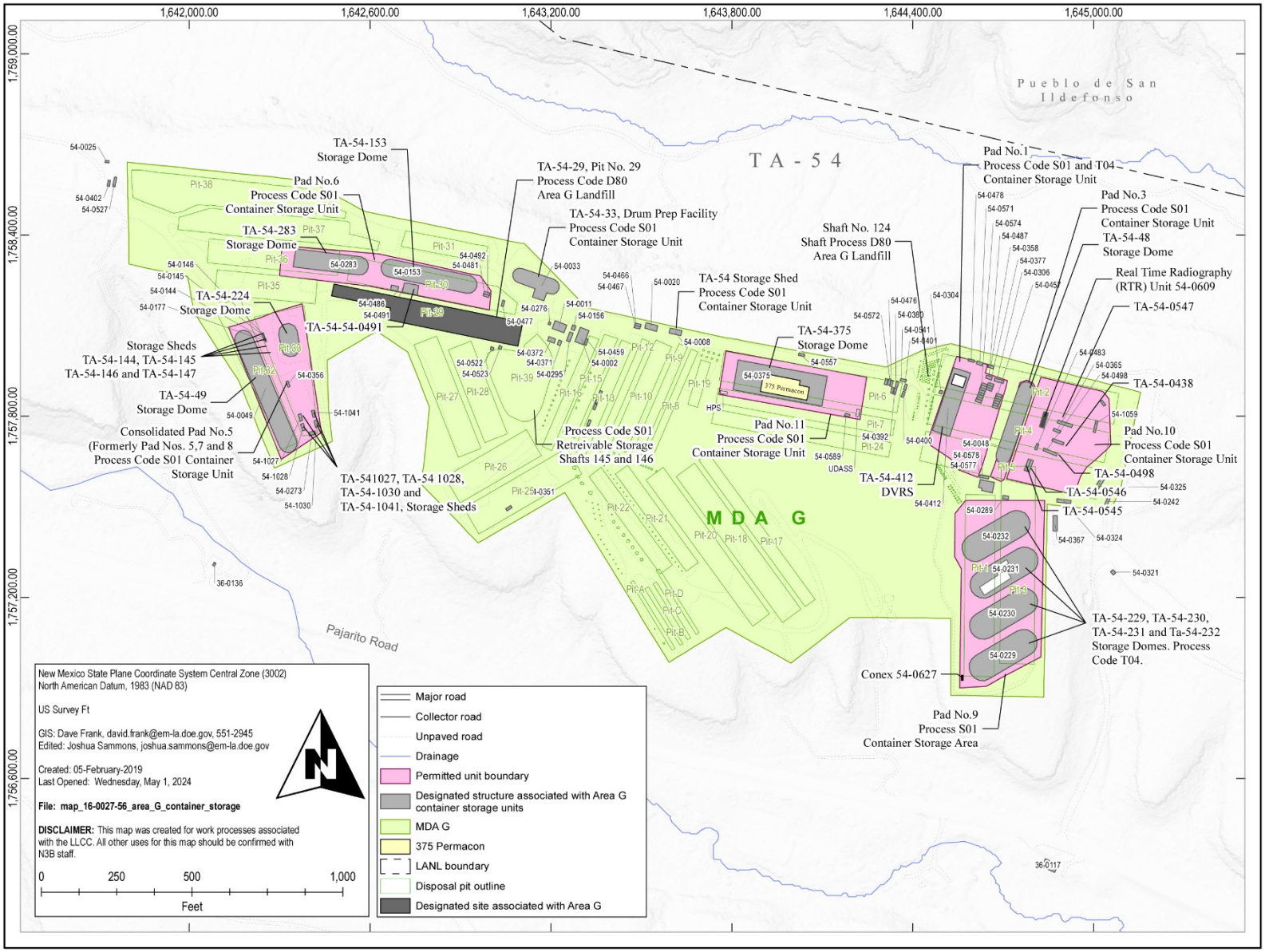

Figure 27 TA-54, Area G, Container Storage and Treatment Units

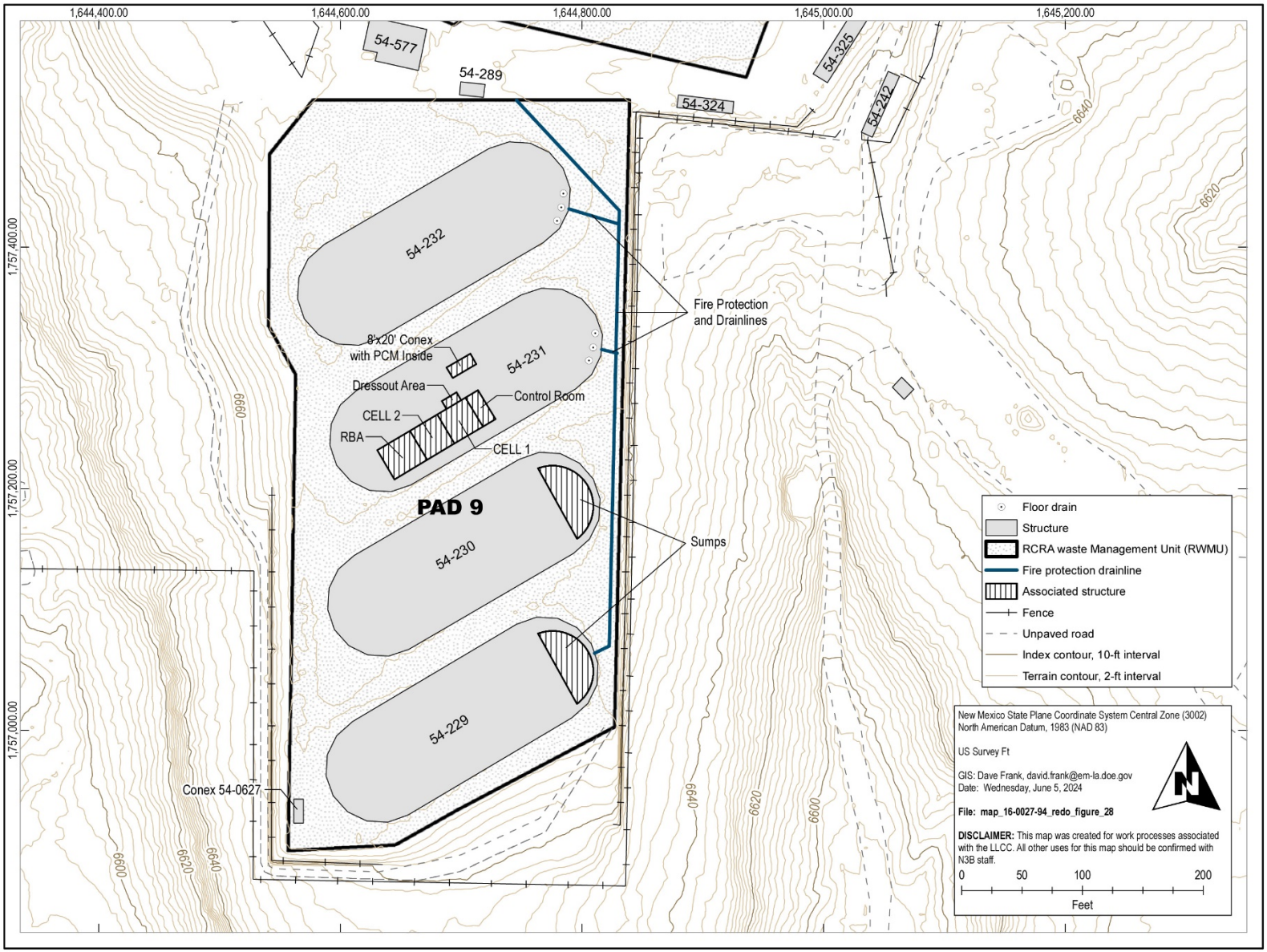

Figure 28: TA-54, Area G, Pad 9 Outdoor Container Storage/Treatment Unit (TWSP Domes 229, 230, 231, and 232)

Appendix C

Microsoft Word Files of Revised Hazardous Waste Facility Permit, and Attachments A, and G.10 (on CD included with this document)

N3B RECORDS	
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Document Title: Appendix C Class 1 Permit Modification Request for Administrative Changes at Technical Area 54, Area G, Pad 9, of the Los Alamos National Laboratory Hazardous Waste Facility Permit, EPA ID No. NM0890010515	☒ **No restrictions** ☐ **UCNI** ☐ **Copyrighted**
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