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NATIONAL LABORATORY
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OCT 0 5 2017

Date:
Symbol: EPC-DO: 17-407
LA-UR: 17-28971
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

SUBJECT: Transmittal of Class 1 Permit Modification Request to Remove a Refrigeration Unit from Technical Area 50, Building 69

Dear Mr. Kieling:

This letter transmits a Class 1 permit modification request to remove a structure from the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit issued to the Department of Energy (DOE) and Los Alamos National Security, LLC (LANS), collectively the Permittees, in November 2010. The permit modification request provides proposed revisions to Permit Attachments A, G.4, and N.

This permit modification request has been prepared as required by Permit Section 3.1(3) in accordance with the Code of Federal Regulations, Title 40 (40 CFR) § 270.42(a)(2) as a permit modification requiring prior approval from the New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB). This Class 1 permit modification request consists solely of changes associated with the removal of a structure from a permitted unit and administrative changes associated with that removal in accordance with 40 CFR § 270.42, Appendix I, Item A.1. Permit Section 3.1(3) requires that all figures accurately reflect the location of all buildings and structures, regardless of whether they manage hazardous waste.

Included in this permit modification request package is the transmittal letter, a signed certification, and an enclosure that provides a description of the proposed changes and pages of revised text and/or figures from Permit Attachments A, G.4, and N.

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 the entire Permit Attachment. The electronic copy, provided only to the NMED-HWB, contains a reproduction of the

hardcopy in portable document format (pdf) along with all the word processing files used to create the hardcopy.

Upon approval by the NMED-HWB, this permit modification will be sent to the NMED-HWB maintained LANL facility mailing list in accordance with 40 CFR § 270.42(a)(1)(ii) within ninety days of approval of this permit modification request. If you have comments/questions or would like to meet regarding this submittal, please contact Mark P. Haagenstad, LANS, at (505) 665-2014 or David S. Rhodes, Environmental Management Los Alamos Field Office, at (505) 665-5325.

Sincerely,

John C. Bretzke
Division Leader
Environmental Protection & Compliance Division
Los Alamos National Security, LLC

Sincerely,

David S. Rhodes
Director, Office of Quality & Regulatory Compliance
Environmental Management
Los Alamos Field Office

JCB/DSR/MPH: am

Enclosures 1: Class 1 Permit Modification Request to Remove a Refrigeration Unit from Technical Area 50, Building 69

Copy: Laurie King, USEPA/Region 6, Dallas, TX (E-File)
Butch Tongate, NMED, Santa Fe, NM, (E-File)
J. C. Borrego, NMED, Santa Fe, NM, (E-File)
Neelam Dhawan, NMED/HWB, Santa Fe, NM, (E-File)
Siona Briley, NMED/HWB, Santa Fe, NM, (E-File)
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SUBJECT: Transmittal of Class 1 Permit Modification Request to Remove a Refrigeration Unit from Technical Area 50, Building 69

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Included in this permit modification request package is the transmittal letter, a signed certification, and an enclosure that provides a description of the proposed changes and pages of revised text and/or figures from Permit Attachments A, G.4, and N.

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ENCLOSURE 1

Class 1 Permit Modification Request to Remove a Refrigeration Unit from Technical Area 50, Building 69

EPC-DO: 17-407

LA-UR-17-28971

Date: OCT 0 5 2017

Class 1 Permit Modification Request to Remove a Refrigeration Unit from Technical Area 50, Building 69

This document consists of a Class 1 permit modification request for the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (Permit) issued to the Department of Energy and the Los Alamos National Security, LLC, collectively known as the Permittees, in November 2010 (EPA ID # NM0890010515). All proposed text revisions are included with red editing marks to indicate changes within Permit Attachments A and G.4. These changes, as well as the replacement figures for Attachments G.4 and N, are provided in this modification. A signed certification, as required by Title 40 of the Code of Federal Regulations (40 CFR) 270.11, is provided with the transmittal letter.

Description

The purpose of this modification submittal is to describe the proposed removal of a refrigeration unit within the storage/treatment unit located within Technical Area (TA) 50, Building 69 (TA-50-69). The removal of the refrigeration unit will entail revisions to Attachment A, *Technical Area (TA) – Unit Descriptions*; Attachment G.4, *Technical Area 50, Building 69 Indoor Container Storage/Treatment Unit Closure Plan;* and Attachment N, *Figures*. This modification includes the proposed removal of a refrigeration unit that was utilized for the temperature controlled storage of waste containers during a single treatment campaign for remediated nitrate salt-bearing waste. Temperature controlled storage of waste at the unit is no longer necessary and will be decommissioned and removed from the permitted unit.

Prior to decommissioning, a thorough records review will be performed to determine if there were any releases located within the refrigeration unit; to-date there have been no releases of hazardous material from the refrigeration unit. The unit will be removed from the permitted unit to provide space to store waste that either requires treatment at TA-50-69 Indoor Permitted Unit or is awaiting transport to another permitted unit for storage. The unit will be dispositioned in accordance with LANL waste management procedures as required by Permit Attachment G.4, *Technical Area 50, Building 69 Indoor Container Storage/Treatment Unit Closure Plan*. Documentation of these efforts will be kept as part of the Facility Operating Record as required by the Permit, and will be utilized when closure activities at the permitted unit begin. The permitted unit will continue to be used for the storage and treatment of hazardous waste.

Basis

This modification has been prepared in accordance with 40 CFR § 270.42(a)(2) as required by Permit Section 3.1(3). The permit condition at Permit Section 3.1(3) requires that buildings or structures located at permitted units be accurately reflected within the figures in Attachments G

and N of the Permit. Proposed changes to figures and text will reflect the removal of the refrigeration unit from figures within the Permit. The refrigeration unit within the TA-50-69 Indoor Permitted Unit was utilized for hazardous waste management at a permitted unit, therefore, the permit modification has been prepared as a Class 1 permit modification that requires prior approval from the NMED-HWB.

Discussion of Changes

Proposed Permit changes are described below and the applicable changes are shown within Attachment 1 of this document with red editing marks to indicate changes.

Attachment A, *Technical Area (TA) – Unit Descriptions*

Section A3.1, *TA-50-69 Indoor Permitted Unit* reflects the removal of language related to the refrigeration unit at TA-50-69 within Room 102.

Permit Attachment G.4, *Technical Area 50, Building 69 Indoor Container Storage Unit Closure Plan*

Proposed changes to the closure plan include changing the description of the refrigeration unit within Section 2.0, *Description of Unit to be Closed*, to past tense. Additionally, the refrigeration unit footprint has been removed from Figure G.4.1: *Technical Area 50, Building 69, Room 102 Container Storage/Treatment Unit Sampling Grid and Additional Sampling Locations.*

Attachment N, *Figures*

Figure 23: *Technical Area (TA) 50, Building 69, Indoor Storage/Treatment Unit and Outdoor Container Storage Unit*, was revised to remove the refrigeration unit.

Attachment 1

Text Changes and Replacement Figures for Permit Attachments A, G.4, and N

LA-UR-17-28971

ATTACHMENT A

TECHNICAL AREA (TA) - UNIT DESCRIPTIONS

A.3.1 TA-50-69 Indoor Permitted Unit

The TA-50-69 Indoor permitted unit consists of Rooms 102 and 103 as shown in Figure 23 in Attachment N (*Figures)*. Room 102, the main process room, measures approximately 45 feet wide and 52 feet long. Room 103, the unloading area, measures approximately 18 feet wide and 19 feet long and is located adjacent to and southeast of Room 102. A 12 foot by 20-foot roll-up vehicle access door is located at the southernmost end of Room 103 separating the unloading area (Room 103) from the vehicle airlock entrance (Room 104). This design allows for unobstructed transport of oversized fiberglass-reinforced plywood boxes from outside the facility, through the vehicle airlock entrance, into the unloading area, and into the glove box cutting enclosure. A smaller glovebox, designed for mounting of a single parent container and multiple daughter containers at one time, ~~and a refrigeration unit that measures less than 12 feet by 12 feet are~~ is also located within Room 102.

The small glovebox located in Room 102 is used for sorting, segregation, resizing, and treatment of transuranic mixed waste. The glovebox was designed in 1994 and installed in the mid-1990s. It has two 55-gallon daughter drum bag out ports, a 14-inch diameter bag-out port, and a single 55-gallon drum waste bag-on port. The box is 11 feet long, 3 feet wide, and 30 inches high. The box has seven work stations, three on the front side and four on the back. The waste drum is attached straight on from the front side of the glovebox and accessed from the back of the box. A liquid catch basin is located below the parent bag-on port to collect liquid from the parent drum. The glovebox is equipped with a water fire sprinkler for fire suppression. Ventilation for the glovebox is pulled in from the room and exhausted through high-efficiency particulate air (HEPA) filters on the glovebox and then through the facility HEPA filters.

Mixers and blender will be used to provide mixing to ensure the waste being treated is well blended; first with water to aid in processing (by reducing the viscosity and dissolving the nitrate salts, in the case of solids), and then with zeolite to absorb the nitrate solution and provide an inorganic matrix. Volumetric containers will be used to measure the ingredients (water, waste, and zeolite). Waste removed from the parent container will be collected in a container to move to the mixers for processing. Water will be delivered to the mixer via piping through the glovebox patch panel, and/or from a container mounted to a glovebox opening via a pump. Zeolite will be loaded into the glovebox. All contents of a single waste container will be treated with in a single shift, or the waste containers (parent and daughter) will be closed using a vented, rigid cover if the waste must be left unattended mid treatment.

The liquid contents of the nitrate salt-bearing waste containers will be decanted from the parent waste container, captured in a container, added to the mixer and then blended with zeolite. A waste liquid-to-zeolite volume ratio of at least 1:3 will be utilized, followed by blending using a mixer until the mixture is combined. If liquid enters the catchment basing within the glovebox, it will be absorbed in the catchment basin using zeolite and then moved to the mixer and zeolite will be added and blended to combine until the mixture is stabilized. Stabilized liquids will be placed into a daughter container. All three subsets of nitrate salt-bearing waste streams require this treatment process for liquids within the parent container. In the case of cemented nitrate salt-bearing waste, no further treatment is necessary for the cemented solids within the container.

ATTACHMENT G.4
TECHNICAL AREA 50, BUILDING 69
INDOOR CONTAINER STORAGE/TREATMENT UNIT
CLOSURE PLAN

1.0 INTRODUCTION

This closure plan describes the activities necessary to close the indoor hazardous waste container storage/treatment unit which is comprised of Rooms 102 and 103 at Technical Area (TA) 50, Building 69 (TA-50-69) 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, 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, and closure activity documentation associated with the closure will be on file with hazardous waste compliance personnel at the Facility and at the U.S. Department of Energy (DOE) Los Alamos Site Office. Prior to closure of the permitted unit, this closure plan may be amended in accordance with Permit Section 9.4.8, as necessary and appropriate, to provide updated sampling and analysis plans and to incorporate updated decontamination technologies. Amended closure plans shall be submitted to the New Mexico Environment Department (Department) for approval prior to implementing closure activities.

2.0 DESCRIPTION OF UNIT TO BE CLOSED

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

The permitted unit consists of adjacent Rooms 102 and 103. Room 102, the main process room, measures approximately 45 feet (ft) wide and 52 ft long and contains a large glovebox which occupies a substantial portion of the room; the long dimension is oriented northwest-southeast. A smaller glovebox, designed for mounting of a single drum at one time is also located within Room 102 was designed in 1994 and is 11 feet long, 3 feet wide and 30 inches high. While the entirety of Room 102 may be used for storage, the primary area utilized for hazardous waste storage is an 11- by 11-ft roped-off section. ~~A refrigeration unit that measures less than 12 feet by 12 feet is located in Room 102.~~ The floor is concrete with an epoxy coating and there is an operational drain located in Room 102 in the northeast area near the north wall. There is a mezzanine above Room 102 which is not part of the permitted unit. A refrigeration unit that measured 6 feet by 6 feet was located in Room 102 for the remediated nitrate salt-bearing waste campaign. It was removed and dispositioned in late 2017.

Room 103, the unloading area, measures approximately 18 ft wide and 19 ft long and is located adjacent to, and southeast of, Room 102. A 12-ft by 20-ft roll-up loading vehicle access door is located at the southernmost end of the room and an operational drain is located in the middle of the room. Both drains in the two rooms are operational for firewater collection and will drain into holding tanks located in the building.

The waste stored at the permitted unit consists of hazardous waste in both liquid and solid form since 1995 and has been subject to waste management regulations under RCRA. Due to the scope of process operations at the permitted unit, the wastes stored include those in solid and liquid form. Additionally, the smaller glovebox within the unit is utilized for treatment by stabilization of waste in containers using zeolite. Permit Part 3 (*Storage in Containers*), Permit Part 7 (*Stabilization in Containers*), Permit Attachment A (*Technical Area (TA)-Unit Descriptions*), Permit Attachment B (*Part A Application*), and Permit Attachment C (*Waste*

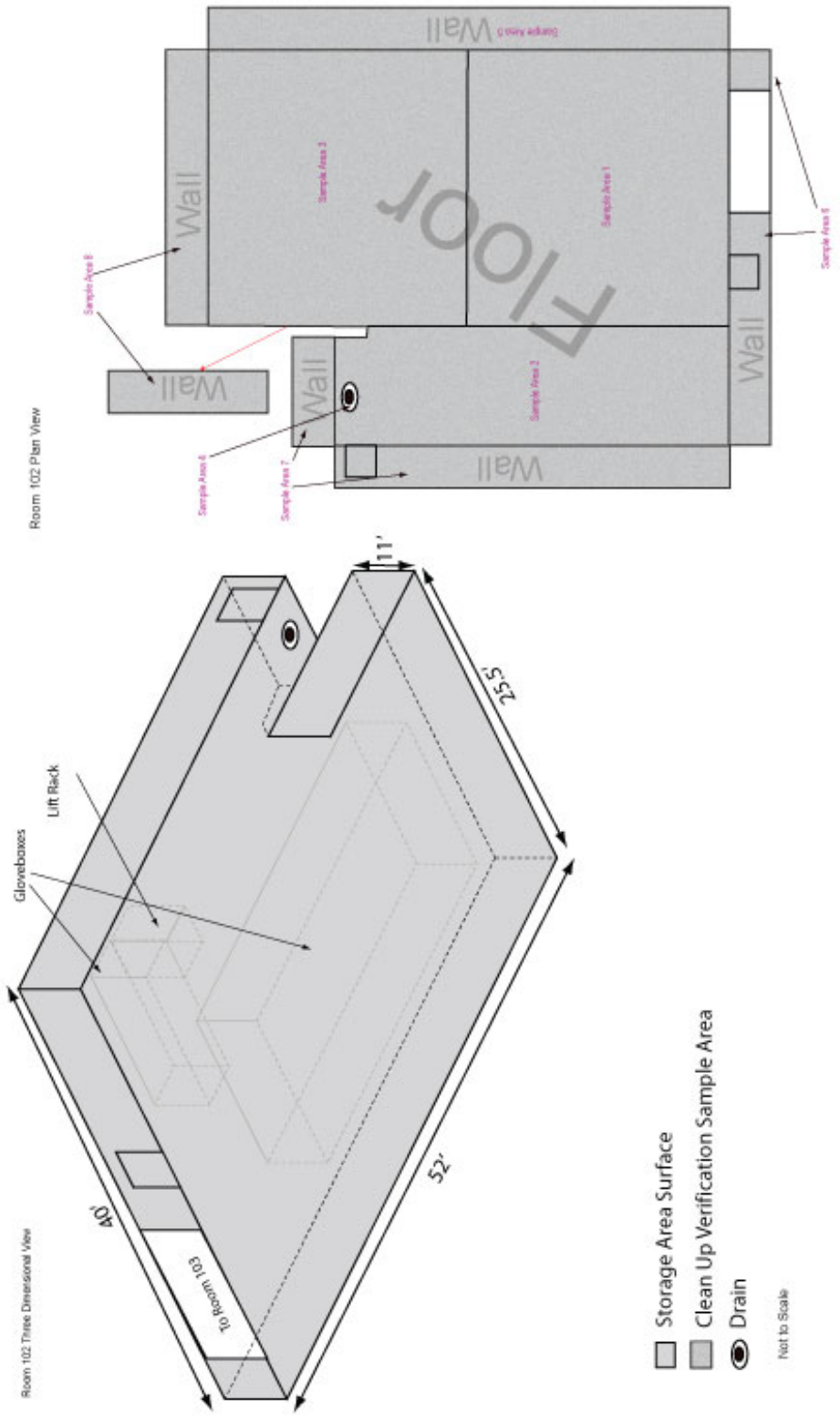
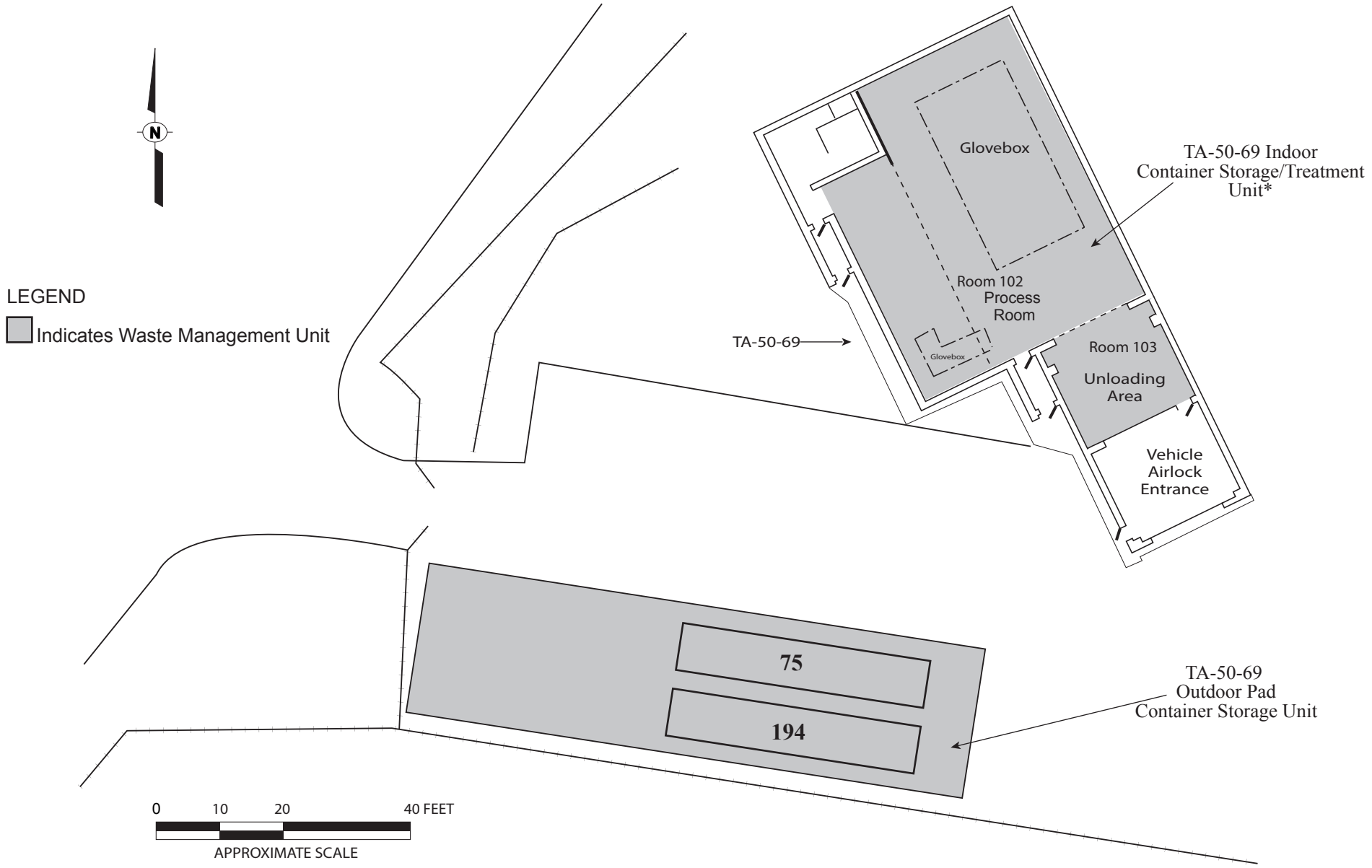


Figure G.4-1
Technical Area 50, Building 69, Room 102 Container Storage/Treatment Unit Sampling Grid and Additional Sampling Locations

ATTACHMENT N

FIGURES



*Note: Container Storage Area in Building 69 does not include mezzanine.

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

Attachment 2

Certification

Document: Class 1 Modification Remove TA-50-69 Refrigeration Unit
Date: October 2017

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.

JCB

10-3-17

John C. Bretzke
Division Leader
Environmental Protection and Compliance Division
Los Alamos National Security, LLC

Date Signed

10-5-2017

David S. Rhodes
Director, Office of Quality & Regulatory Compliance
Environmental Management
Los Alamos Field Office

Date Signed

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