Los Alamos NATIONAL LABORATORY EST. 1943

EM-LA

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Date: MAY 0 3 2017
Symbol: EPC-DO: 17-141
LA-UR: 17-22355
Locates Action No.: N/A

Mr. John E. Kieling
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 Update Treatment Process within the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit, EPA ID # NM0890010515**

Dear Mr. Kieling:

The purpose of this letter is to submit a Class 1 permit modification request to update the treatment process in the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (Permit) that was issued to the Department of Energy (DOE) and Los Alamos National Security, LLC (LANS), the Permittees, in November 2010. The permit modification request provides proposed revisions to Permit Section A.3.1 in Enclosure-1, *"Class 1 Permit Modification Request Treatment Process Update"* and Attachment-A, *"Technical Area (TA) - Unit Descriptions"*.

The proposed modification has been prepared in accordance with the Code of Federal Regulations [CFR], Title 40 (40 CFR) § 270.42(a)(2). This Class 1 permit modification consists of changes identified in 40 CFR § 270.42, Appendix I, Item F.1.c. This permit modification package includes:

1) Transmittal letter
2) Enclosure 1, Class 1 Permit Modification Request Treatment Process Update with Attachment A, Technical Area (TA) – Unit Descriptions.
3) Signed certification page

Included herein are three hard copies and one electronic copy of this submittal. The hardcopy submittal contains the Permit section where text has been changed, rather than a copy of the entire Permit Attachment A. The electronic copy, provided only to NMED-HWB, contains a reproduction of the hardcopy in portable document format (PDF) and the word processing files used to create the hardcopy.

Notification of this 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 the approval of this permit modification.

If you have comments or questions regarding this permit modification, please contact David S. Rhodes, (EM-LA) at (505) 665-5325 or Mark P. Haagenstad (LANS) at (505) 665-2014.

Sincerely,

John C. Bretzke
Division Leader
Environmental Protection & Compliance

Sincerely,

David S. Rhodes
Director
Office of Quality & Regulatory Compliance

JCB/DSR/AE:am

Enclosure 1: Class 1 Permit Modification Request to Update Treatment Process with Attachment A, Technical Area (TA) – Unit descriptions

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Dear Mr. Kieling:

The purpose of this letter is to submit a Class 1 permit modification request to update the treatment process in the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (Permit) that was issued to the Department of Energy (DOE) and Los Alamos National Security, LLC (LANS), the Permittees, in November 2010. The permit modification request provides proposed revisions to Permit Section A.3.1 in Enclosure-1, *"Class 1 Permit Modification Request Treatment Process Update"* and Attachment-A, "*Technical Area (TA) - Unit Descriptions".*

The proposed modification has been prepared in accordance with the Code of Federal Regulations [CFR], Title 40 (40 CFR) § 270.42(a)(2). This Class 1 permit modification consists of changes identified in 40 CFR § 270.42, Appendix I, Item F.1.c. This permit modification package includes:

1) Transmittal letter
2) Enclosure 1, Class 1 Permit Modification Request Treatment Process Update with Attachment A, Technical Area (TA) – Unit Descriptions.
3) Signed certification page

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ENCLOSURE 1

Class 1 Permit Modification Request to Update Treatment Process

EPC-DO: 17-141

LA-UR-17-22355

Date: MAY 0 3 2017

Class 1 Permit Modification Request Treatment Process Update

This document contains a Class 1 Permit Modification Request to 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. The proposed changes are shown in red text for Permit Attachment A, Section A.3.1.

Permit Modification Summary

The purpose of this permit modification submittal is:

- To change the waste-to-water ratio from 1.0:0.5 < volume ratio < 1.0:1.0 to 1.0:0 < volume ratio < 1.0:1.0.
- To state "Waste treatment of the solids (for remediated and unremediated nitrate salt-bearing waste) will occur by first adding a premeasured amount of water to the mixing bowl if the waste is not already wet."
- To state "Using the volumetric ratios, the waste process steps of (1) add water if necessary, (2) blend with nitrate salt-bearing waste, and then (3) add zeolite and blend until mixed."

Basis

This Class 1 permit modification request is being submitted in accordance with 40 CFR 270.42, Appendix I, Item F.1.c as a change to the treatment process necessary to treat wastes that are restricted from land disposal. This modification makes minor updates to the waste treatment process for nitrate salt waste. The waste-to-water ratio is changed to add flexibility to the process in the event that the waste is already wet and doesn't require the addition of water. The ratio for the addition of zeolite to the waste (i.e., the actual stabilization treatment process) has not been changed as part of this modification.

ATTACHMENT A

TECHNICAL AREA (TA) - UNIT DESCRIPTIONS

Waste treatment of the solids (for remediated and unremediated nitrate salt-bearing waste) will occur by first adding a premeasured amount of water to the mixing bowl if the waste is not already wet. A premeasured quantity of waste will then be added to the mixing bowl and mixed to decrease the viscosity to aid with the final blending step. The waste and water mixture will then be blended with zeolite until absorbed. Blending of the waste will occur using mixers, pre-sized measuring containers, and a container for the movement of waste. The volumetric blend ratios are the guiding requirements for the process. These then drive the treatment process to be used based upon the size of the batch to be prepared. The blend ratios are:

- waste-to-water:1.0:0.~~5~~<volume ratio<1.0:1.0
- blended waste and water mixture-to-zeolite: 1.0:2.0<volume ratio<1.0:5.0

Using the volumetric ratios, the waste process steps of (1) add water if necessary, (2) blend with nitrate salt-bearing waste, and then (3) add zeolite and blend until mixed. The Operator will first add a quantity of water and waste within the mixing bowl and blend until combined. A premeasured quantity of zeolite will be added to the mixer bowl and blended until stabilized.

Most debris within the waste containers do not require additional treatment and will either be placed back into the parent container or placed directly into the daughter container with the treated waste. Excess salt or salt-organic absorbent mixtures stuck to the debris waste will be removed from the debris using glovebox gloves, a brush, or a non-sparking brush as necessary. Debris may be stored temporarily in a container that will be attached to a glovebox opening and resized as necessary to be packaged in a waste container. Resizing of debris may include tearing or crumpling the debris using shears or other cutting tools utilizing non-sparking tools or processes. Any additional cellulosic material (*e.g.*,Kimwipes or Wypalls) found within the parent container will require additional treatment and will be macerated with water using a high speed blender and then mixed with zeolite in a least a 1:3 blended waste-water mixture to zeolite ratio.

A.3.2 TA-50-69 Outdoor Permitted Unit

The TA-50-69 Outdoor permitted unit was constructed before 1980 and was first used to store mixed waste in 1982. It is located in the southwest corner of TA-50 (*see* Figure 23 in Attachment N (*Figures)*). The TA-50-69 Outdoor unit is comprised of an unlined and non-coated asphalt pad measuring 24 feet in width and 90 feet in length. The entire pad is approximately 4 inches thick and slopes gently (approximately one to five percent) from west to east and up to 2.5 percent toward the centerline. Transportainers and other weather protective structures (*i.e.*, containers covered with tarps, containers inside SWBs) in the permitted unit provide weather protection for containers of various sizes. Painted lines are used to visually delineate the TA-50-69 Outdoor unit boundary. Drainage swales located in the vicinity divert storm water away from the pad. One drainage swale is located just south of the unit; between it and the material disposal area C. A second drainage swale is located on the west side of the permitted unit between Pecos Drive and the TA-50 fence line.

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.

5-1-17

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

Date Signed

5-3-2017

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

Date Signed