ESHID-603530

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Date: OCT 2 3 2019
Symbol: EPC-DO: 19-359
LA-UR: 19-30023
Locates Action No.:

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

Subject: **Resubmittal of Notice of Violation Response to Item #7 for the Department of Energy, National Nuclear Security Administration and Triad National Security, LLC EPA ID# NM0890010515**

Dear Mr. Kieling:

On September 18, 2019 Los Alamos National Laboratory (LANL) submitted the Response to Notice of Violation with Proposed Penalties (August 20, 2019) Los Alamos National Laboratory, EPA Id. #NM08090010515, EPC-DO:19-338. Upon review of the submitted document, staff identified that an incorrect response for Violation #7 was inadvertently submitted. This document provides the replacement response to Violation #7 on behalf of the U.S. Department of Energy-National Nuclear Security Administration (NNSA) and Triad National Security, LLC (Triad).

7. Failure to maintain records supporting hazardous waste determinations, which is a violation of 20.4.1.300 NMAC, incorporating 40 CFR 262.11(f). Specifically, NMED Inspectors observed a 5-gallon container storing waste nitric acid (W849655) in a Central Accumulation Area ("CAA"), located in TA-60, Bldg. 17, Site ID #6672. The label identified the hazardous waste number as D002; however, nitric acid is also an oxidizer and must also have the D001 hazardous waste number. The Waste Profile for W849655 does not include the D001 hazardous waste number.

Corrective Action: *LANL must provide NMED with documentation that the records supporting the hazardous waste determination for the waste stream listed above is maintained.*

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For the reasons stated below, NNSA-Triad respectfully disagree that it failed to properly characterize the one 5-gallon container referenced above as an ignitable oxidizer that carries the EPA Code D001 pursuant to 20.4.1.300 NMAC, incorporating by reference 40 CFR §262.11(f).

This waste stream at issue consists of inorganic liquids from nitric acid solutions and was characterized under WSP No. 45152, which includes the nitric acid calculations derived by the generator, and additional supporting documentation (see Enclosure 1).

40 CFR §261.21(a)(4) defines an ignitable hazardous waste (D001) as an "oxidizer" if it meets the criterion of the subsection. There is no basis to conclude that this waste stream would qualify as an "oxidizer" under 40 CFR §§261.21(a)(4)(i)(a)(c) or (d). Further, the waste stream is not a material that under §261.21(a)(4)(i)(b) is "forbidden to be transported per US Department of Transportation (DOT) regulations" at 49 CFR §172.101 and 49 CFR §173.21. 49 CFR §172.101, *Hazardous Materials Ta*ble, identifies the Hazard Class of each material; a Hazard Class of 5.1 or 5.2 indicates that the material is a DOT oxidizer. Per this table, not all nitric acid qualifies as a 5.1 oxidizer in column 6. The nitric acid waste stream does not qualify as an oxidizer per the DOT table (i.e., does not carry a Hazard Class of 5.1 or 5.2) defined as follows:

> *"Nitric acid other than red fuming, with more than 20 percent and less than 65 percent nitric acid"* or *"Nitric acid other than red fuming with not more than 20 percent nitric acid"*.

Per the generator, the concentration of nitric acid used in these solutions ranged from 1 Molar (M) to 10M and the final nitric acid concentration was between 4.2% to 42.7% (*see* Attached Memo from William Hollis, Re: Nitric Acid Calculations, Waste Container W849655, CAA, TA-60, Bldg, Site Id. #6672)). Based on these calculations, the nitric acid solution at issue would not qualify as an DOT oxidizer under 49 CFR §172.101, *Hazardous Materials Table Table* under the hazardous materials description of *Nitric acid other than red fuming, with more than 20 percent and less than 65 percent nitric acid* and *Nitric acid other than red fuming with not more than 20 percent nitric acid*. For these reasons, there is no basis to support the conclusion that the nitric acid waste stream qualified as an hazardous waste oxidizer (D001) under 40 CFR §261.21(a)(4)(i)(b).

For these reasons, Triad-NNSA respectfully request that this alleged violation be withdrawn.

If you have comments or questions regarding this permit modification, please contact Patrick Padilla at (505) 667-3932 (Triad) or Karen Armijo at (505) 665-7314 (NA-LA).

Sincerely,

for

Jennifer E. Payne
Acting Division Leader
Environmental Protection and Compliance Division
Triad National Security, LLC
Los Alamos National Laboratory

Sincerely,

for

Karen E. Armijo
Permitting and Compliance Manager
National Nuclear Security Administration
Los Alamos Field Office

ET/KEA/PLP/:cm

Enclosures (s): 1) Additional Supporting Documentation

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ENCLOSURE 1

Additional Supporting Documentation

EPC-DO: 19-359

LA-UR- 19-30023

Date: OCT 2 3 2019

To: Patrick L. Padilla, ESH Team Leader

From: William Kirk Hollis

Re: Nitric Acid Calculations, Waste Container *W849655*, CAA, TA-60, Bldg,17, Site ID #6672

Date: October 22, 2019

I was the generator at the above-site, and prepared nitric acid solution for experimental study. The following information is based on calculations conducted in March 2019. Please let me know if you need any further information.

Nitric Acid Calculations –

Given

Molecular Weight HNO3:	63.01g/mole
Density HNO3:	1.51 g/ml

Question: What is Molarity (M) of a 65% HNO3 concentration?

(65 g HNO3/100g HNO3 solution) * (1 mole HNO3/63.01 g HNO3)* (1.51 g HNO3 solution/1 ml)*(1000ml/L) = 15.6 M

Question: What is 10M HNO3 in %?

(10 mole HNO3/1L)*(1L/1000ml)*(1ml/1.51g HNO3)*(63.01g HNO3/1mole) = 42.7% (w/w)

Question: What is 1M HNO3 in %?

(1 mole HNO3/1L)*(1L/1000ml)*(1ml/1.51g HNO3)*(63.01g HNO3/1mole) = 4.2% (w/w)

Waste was a combination of HNO3 dilutions starting with the 15.6M concentration ranging from 1M to 10M. The final concentration would fall in the range of 42.7% to 4.2%. Based on the following definition from RCRA 2.2.4 Oxidizers,

Probably the easiest way to determine if a waste is a D001 oxidizer is to look up the material on DOT's hazardous materials table at 49 *CFR* 172.101. Column (3) on this table identifies the Hazard Class of each material; a Hazard Class of 5.1 or 5.2 indicates that the material is a DOT oxidizer. We don't profess to be knowledgeable about all DOT requirements; therefore, our bias is to consider all 5.1 and 5.2 materials (when they become wastes) to be D001 wastes, unless advised otherwise by an authorized regulatory agency or a DOT expert. However, if a generator stops here, the classification is not complete, for Column (3) in the hazardous materials table identifies only the primary hazard associated

with a given hazardous material. For a complete classification, the generator must also reference Column (6), which identifies the primary and subsidiary hazards associated with a given hazardous material.

When I check this reference all nitric acid is classified as an 8 (corrosive) however following the text some nitric in column 6 does have a 5.1 (oxidizer). A 12M, highest concentration we had but was diluted so will be less, should fall within these definitions.

	Column 3			Column 6
Nitric acid other than red fuming, with more than 20 percent and less than 65 percent nitric acid	8	UN2031	II	8
Nitric acid other than red fuming with not more than 20 percent, Nitric acid.	8	UN2031	II	8