Department of Energy
National Nuclear Security Administration
Sandia Field Office
P. O. Box 5400
Albuquerque, NM 87185

SEP 29 2014

Mr. Steve Pullen
Manager
Compliance and Technical Assistance Program
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Dr. East, Bldg. 1
Santa Fe, NM 87505

Subject: Notification of Hazardous Waste Treatability Study at Sandia National Laboratories/New Mexico, Environmental Protection Agency Identification Number NM5890110518

Dear Mr. Pullen:

The Department of Energy/National Nuclear Security Administration (DOE/NNSA) and Sandia Corporation (Sandia) plan to conduct a hazardous waste treatability study at Sandia National Laboratories in Albuquerque, New Mexico (SNL/NM).

This notification is submitted to the New Mexico Environment Department (NMED) pursuant to the requirements of *New Mexico Administrative Code, Title 20*, Chapter 4, Part 1, Subpart II (20.4.1.200 NMAC), incorporating *Title 40 of the Code of Federal Regulations, Part 261* (40 CFR 261.4(f) (l) DOE/NNSA and Sandia will begin the treatability study no earlier than 45 days from your receipt of this notification.

The proposed treatability study is designed to evaluate the feasibility of chemically deactivating reactive wastes, with the goal of developing one or more effective treatment methods that can be used for deactivation of these hazardous wastes. A plan for the treatability study is included in Enclosure A to this letter.

The results of the study will be reported annually to NMED by March 15, in accordance with the requirements of 40 CFR 261.4(0(9). The study is not expected to be completed by March 2015; thus, the report will include information regarding the status of the study, and subsequent annual reports will provide additional information.

If you have questions, please contact David Rast of my staff at (505) 845-5349.

Sincerely,

James W. Todd
Assistant Manager for Engineering

Enclosure A
Notification of Hazardous Waste Treatability Study at Sandia National Laboratories/New Mexico, Environmental Protection Agency Identification Number NM5890110518

cc w/ enclosures:
Dave Cobrain Hazardous
Waste Bureau New Mexico
Environment Department Bldg. 1
2905 Rodeo Park Dr. East,
Santa Fe, NM 87505

William Moats
Hazardous Waste Bureau
New Mexico Environment Department
5500 San Antonio Dr. NE,
Albuquerque, NM 87109

Cornelius Amindyas
Hazardous Waste Bureau
New Mexico Environment Department
5500 San Antonio Dr. NE,
Albuquerque, NM 87109

Thomas Skibitski
Chief, DOE Oversight Bureau
New Mexico Environment Department
P.O. Box 5400, MS-1396,
Albuquerque, NM 87185-5400

SNL Customer Funded Record Center, MS-0651

Cynthia Wimberly, SFO/OOM
David Rast, SFO/ENG

cc w/o enclosure:
Amy Blumberg, SNL/NM, MS-0141
Sidney Gutierrez, SNL/NM, MS-0725
Francis Nimick, SNL/NM, MS-0729
Jaime Moya, SNL/NM, MS-1453
David Jones, SNL/NM, MS-1455
Robin Kalinich, SNL/NM, MS-1454
Anita Reiser, SNL/NM, MS-0729
James Todd, SFO/ENG
14-737-594496

Enclosure A

Hazardous Waste Treatability Study Plan

Sandia National Laboratories
NM5890110518

Enclosure A

Reactive Wastes in Solution
Hazardous Waste Treatability Study Plan
September, 2014

Treatability Study Purpose

The study is designed to evaluate the feasibility and effectiveness of using strong basic compounds to chemically deactivate reactive wastes. The goal is to develop one or more methods that will consistently and effectively deactivate the wastes. The study samples may exhibit the hazardous waste characteristics of corrosivity and/or ignitability following deactivation, and may undergo further treatment for one or both of those characteristics to determine whether additional treatment steps can be undertaken without reducing the effectiveness of the deactivation.

The treatment methods that are developed through this study may be used for treatment of hazardous and mixed wastes generated at Sandia National Laboratories.

Treatability Study Location

Sandia National Laboratories/New Mexico
EPA ID NM5890110518

Hazardous Waste Generator

Sandia Corporation (Sandia)
EPA ID NM5890110518

Quantity and Description of Hazardous Waste to be Evaluated in Treatability Study

Less than 1000 kilograms of solutions containing reactive wastes will be used in the treatability study. Individual samples to be studied are not expected to exceed 50 milliliters in volume. No more than 250 kg per day of hazardous wastes will be treated in any one day.

Scope and Application

Three classes of reactive wastes will be evaluated: nitramines, nitroaromatic compounds, and nitrate esters. The samples to be evaluated in the study consist of solutions of reactive constituents from these three classes.

Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

Study Description

During the study, the samples will undergo treatment in containers for one or more of the following hazardous characteristics:

- Reactivity. Treatment through addition of one or more strong basic compounds with the goal of developing a method to consistently and effectively deactivate the reactive constituents.
- Corrosivity. Samples may undergo subsequent treatment (neutralization) to address the corrosive characteristic, with the goal of determining whether the additional treatment can be performed without reducing the effectiveness of the deactivation step.
- Ignitability. Samples may also undergo subsequent treatment (chemical deactivation) to determine whether the ignitability characteristic can be addressed without reducing the effectiveness of the initial deactivation or neutralization.

Treatment Effectiveness

Following treatment, the samples will be evaluated for treatment effectiveness by one or more of the following methods as appropriate:

- Analysis for the presence of reactive constituents.
- Determination of pH.
- Determination of flashpoint in accordance with 40 CFR 261.21.

Several treated samples may be retained for up to 12 months following treatment, at which time they will be evaluated again for treatment effectiveness and stability of the reaction products. The decision to retain samples will be made after the initial treatment steps are completed.

Records

Records will be maintained in accordance with 40 CFR 261.4(f)(7), including the following:

- For the study – start date and end date.
- For the study – the total quantity of wastes in the study each day.
- For each sample – quantity and constituents.
- For each sample – treatment steps and treatment dates.
- For each sample – treatment results (effectiveness).
- For each unused or treated sample – waste characterization and disposition.

Schedule

The study will commence no earlier than 45 days after notification to the New Mexico Environment Department. The study is expected to last as long as 18 months due to retention of treated samples.

Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

Treatability Study Sample Management

The wastes and residues from the treatability study will be characterized as needed for further management and disposal in accordance with the requirements of 40 CFR 261, 262, 265, and 268.

Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.