



U.S. DEPARTMENT OF  
**ENERGY**

ESHID-603668

**National Nuclear Security Administration**

Los Alamos Field Office  
3747 West Jemez Road, A316  
Los Alamos, New Mexico 87544  
(505) 667-5105/Fax (505) 667-5948

**Environmental Management**

Los Alamos Field Office  
1200 Trinity Drive, Suite 400P  
Los Alamos, New Mexico 87544  
(240) 562-1122

Date: DEC 01 2021

Mr. Rick Shean, Chief  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505-6313

**Subject: Fiscal Year 2021 Reporting of Releases and Instances of Noncompliance with the Los Alamos National Laboratory Hazardous Waste Facility Permit, Los Alamos National Laboratory, EPA ID #NM0890010515**

Dear Mr. Shean:

The United States Department of Energy (DOE) and its field offices, the National Nuclear Security Administration Los Alamos Field Office (NA-LA) and the Environmental Management Los Alamos Field Office (EM-LA), together with Triad National Security, LLC (Triad) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B), collectively the Permittees, submit the enclosed Fiscal Year 2021 Reporting of Releases and Instances of Noncompliance with the Los Alamos National Laboratory Hazardous Waste Facility Permit (Report) to the New Mexico Environment Department-Hazardous Waste Bureau (NMED-HWB).

The Report is required by the Los Alamos National Laboratory Hazardous Waste Facility Permit (Permit) Section 1.9.13, *Written Reporting of a Non-threatening Release*, and Permit Section 1.9.14, *Other Noncompliance*. The Permit requires the Permittees report all instances of noncompliance with the Permit and report any releases at or from permitted units that did not pose a threat to human health or the environment. The Permit requires the Report be submitted annually by December 1<sup>st</sup> for the fiscal year ending September 30<sup>th</sup>.

Enclosure 1 addresses instances of noncompliance with the Permit and releases at permitted units under operational control of NA-LA/Triad. Enclosure 2 addresses instances of noncompliance with the Permit and releases at permitted units under operational control of EM-LA/N3B. Each enclosure includes a certification page from the responsible Permittee as well as observations from the Parson's Engineering Triennial review at the respective permitted units.

Rick Shean  
EPC-DO-21-361

If you have questions or comments concerning this submittal for Triad, please contact Karen E. Armijo (NA-LA) at (505) 665-7314 or Patrick L. Padilla (Triad) at (505) 412-0462.

If you have questions or comments concerning this submittal for N3B, please contact Arturo Duran of the Department of Energy-Environmental Management (EM-LA) at (575) 373-5966 or Emily Day (N3B) at (505) 695-4243.

Sincerely,

**Karen E. Armijo** Digitally signed by Karen E. Armijo  
Date: 2021.11.24 15:12:47 -07'00'

Karen E. Armijo  
Permitting and Compliance Program Manager  
National Nuclear Security Administration  
Los Alamos Field Office  
U.S. Department of Energy

Sincerely,



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HARCEK  
Date: 2021.11.26 07:49:39 -07'00'

For

M. Lee Bishop, Director  
Office of Quality and Regulatory Compliance  
Environmental Management  
Los Alamos Field Office  
U.S. Department of Energy

KEA:JEP:jlm

Enclosure(s): 1) Fiscal Year 2021 Reporting of Releases and Instances of Noncompliance with the Los Alamos National Laboratory Hazardous Waste Facility Permit U.S. Department of Energy, National Nuclear Security Administration Los Alamos Field Office and Triad National Security, LLC

2) Fiscal Year 2021 Reporting of Releases and Instances of Noncompliance with the Los Alamos National Laboratory Hazardous Waste Facility Permit U.S. Department of Energy, Environmental Management Los Alamos Field Office and Newport News Nuclear BWXT-Los Alamos, LLC

cc w/enclosures:

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Rick Shean  
EPC-DO-21-361

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U.S. DEPARTMENT OF  
**ENERGY**

**COPY**

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Los Alamos Field Office  
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(505) 667-5105/Fax (505) 667-5948

**Environmental Management**  
Los Alamos Field Office  
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Date: DEC 01 2021

Mr. Rick Shean, Chief  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505-6313

**Subject: Fiscal Year 2021 Reporting of Releases and Instances of Noncompliance with the Los Alamos National Laboratory Hazardous Waste Facility Permit, Los Alamos National Laboratory, EPA ID #NM0890010515**

Dear Mr. Shean:

The United States Department of Energy (DOE) and its field offices, the National Nuclear Security Administration Los Alamos Field Office (NA-LA) and the Environmental Management Los Alamos Field Office (EM-LA), together with Triad National Security, LLC (Triad) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B), collectively the Permittees, submit the enclosed Fiscal Year 2021 Reporting of Releases and Instances of Noncompliance with the Los Alamos National Laboratory Hazardous Waste Facility Permit (Report) to the New Mexico Environment Department-Hazardous Waste Bureau (NMED-HWB).

The Report is required by the Los Alamos National Laboratory Hazardous Waste Facility Permit (Permit) Section 1.9.13, *Written Reporting of a Non-threatening Release*, and Permit Section 1.9.14, *Other Noncompliance*. The Permit requires the Permittees report all instances of noncompliance with the Permit and report any releases at or from permitted units that did not pose a threat to human health or the environment. The Permit requires the Report be submitted annually by December 1<sup>st</sup> for the fiscal year ending September 30<sup>th</sup>.

Enclosure 1 addresses instances of noncompliance with the Permit and releases at permitted units under operational control of NA-LA/Triad. Enclosure 2 addresses instances of noncompliance with the Permit and releases at permitted units under operational control of EM-LA/N3B. Each enclosure includes a certification page from the responsible Permittee as well as observations from the Parson's Engineering Triennial review at the respective permitted units.



# ENCLOSURE 1

Fiscal Year 2021 Reporting of Releases and Instances of  
Noncompliance with the Los Alamos National Laboratory  
Hazardous Waste Facility Permit

U.S. Department of Energy, National Nuclear Security  
Administration Los Alamos Field Office and  
Triad National Security, LLC

EPC-DO: 21-361

LA-UR-21-31184

Date: DEC 01 2021

### CERTIFICATION

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.

JENNIFER PAYNE  
(Affiliate)

Digitally signed by JENNIFER PAYNE  
(Affiliate)  
Date: 2021.11.17 13:58:50 -07'00'

---

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

---

Date Signed

Karen E.  
Armijo

Digitally signed by Karen E.  
Armijo  
Date: 2021.11.24 15:13:15  
-07'00'

---

**Karen E. Armijo**  
Permitting and Compliance Program Manager  
National Nuclear Security Administration  
Los Alamos Field Office  
U.S. Department of Energy

---

Date Signed



**Fiscal Year 2021 Reporting of Releases and Instances of Noncompliance with the  
Los Alamos National Laboratory Hazardous Waste Facility Permit -  
U.S. Department of Energy, National Nuclear Security Administration  
Los Alamos Field Office and Triad National Security, LLC**

Introduction

This annual report has been prepared by the US Department of Energy (DOE), National Nuclear Security Administration, Los Alamos Field Office (NA-LA) and Triad National Security, LLC (Triad) to meet a reporting requirement of the Los Alamos National Laboratory (LANL or the Laboratory) Hazardous Waste Facility Permit (the Permit). Permit Sections 1.9.13 and 1.9.14 require reporting of: 1) any non-threatening release of hazardous waste or constituents from or at a permitted unit and 2) all instances of noncompliance with the Permit. Accordingly, this report must be submitted to the New Mexico Environment Department-Hazardous Waste Bureau annually, by December 1, for the previous year ending September 30<sup>th</sup>, which covers the reporting period October 1, 2020 through September 30, 2021.

Please note that Enclosure 1 only addresses releases and instances of noncompliance at permitted units under operational control of Triad.

For this reporting period, none of the identified releases or incidents of noncompliance detailed within this report posed a potential threat to human health or the environment.

Facility Information

Owner and Operator:  
United States Department of Energy  
3747 West Jemez Road, MS A316  
Los Alamos, NM 87544

Co-Operator:  
Triad National Security, LLC.  
PO Box 1663  
Los Alamos, NM 87545

Facility:  
Los Alamos National Laboratory  
Bikini Atoll Road, SM-30  
Los Alamos, NM 87545

Releases from or at a Permitted Unit

During the reporting period, there were two releases within or from a permitted unit under operational the control of Triad. These releases are described below. With respect to the term "release" as used in this report, the Permit defines a release as "any accidental or intentional spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, or dumping of any hazardous waste or hazardous constituents inside a permitted unit or from a permitted unit to the environment, including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous waste or hazardous constituents."

Technical Area (TA) 55 Vault

A water valve in the TA-55 vault was inadvertently left in the open position and caused an overflow of water. An estimated 1,763 gallons of water was released on to the floor. There was no release outside the vault nor into the environment. The valve was isolated and closed and a fact-finding was held to determine the cause of the incident. The released water was sampled

**Fiscal Year 2021 Reporting of Releases and Instances of Noncompliance with the  
Los Alamos National Laboratory Hazardous Waste Facility Permit -  
U.S. Department of Energy, National Nuclear Security Administration  
Los Alamos Field Office and Triad National Security, LLC**

and found not to have detectable levels of radioactivity. The water was pumped to a sump connected to the facility industrial waste line which leads to the Radiological Liquid Waste Treatment Facility and disposed. Corrective actions are currently being evaluated and are under way. The water release did not impact any containers of hazardous or mixed waste.

*Chemistry and Metallurgy Research Facility, TA-3, Building 29, Room 9010*

The handle on an eyewash station in Room 9010 was not completely closed after the monthly maintenance check. As a result, water leaked out of the eyewash station and on to the floor. Once identified, the eyewash handle was closed completely, the minor spill was contained with absorbent pigs to ensure no migration to containers or outside the facility. The absorbent pigs were assayed and disposed of as low level waste. This release did not impact any containers of hazardous or mixed waste.

Instances of Noncompliance with the Permit

From October 1, 2020 through September 30, 2021, Triad documented ten (10) instances of noncompliance with the Permit. These occurrences are provided in *Table 1. Fiscal Year 2021 Reporting of Releases and Instances of Noncompliance NA-LA/Triad* and are organized by area.

LANL Hard Copy Public Reading Room

Due to a state-wide rise in COVID-19 cases, there was limited access to the LANL Hardcopy Public Reading Room in Pojoaque, New Mexico from November 2020 through April 2021. All documents affected by the COVID-19 limitation were delivered to the LANL Hardcopy Public Reading Room in May 2021. All documents were available in the Electronic Public Reading Room during this period.

Parson's Enterprise Construction Management Services Triennial Report

*Background*

In 2014, an improperly packaged drum of transuranic waste, originating from LANL, released radiation into the environment at the Waste Isolation Pilot Plant in Carlsbad, New Mexico. The Waste Isolation Pilot Plant closed for necessary investigation and repairs and reopened in 2017. Based on the investigation results, the New Mexico Environment Department (NMED) issued the LANL Order for alleged hazardous waste and regulatory violations of the LANL Hazardous Waste Facility Permit. The Co-Permittees (NA-LA and the Management and Operations contractor for the Laboratory) collectively entered into a Settlement Agreement to resolve the alleged violations.

The Settlement Agreement, Section 11.B.38 (in part), states:

*The Respondents, their constituent agencies, contractors, and affiliates agree to address any potential regulatory violations identified in the triennial reviews. NMED agrees to refrain from taking any enforcement action against the Respondents, their constituent agencies, contractors and affiliates for any potential regulatory violations, or operational deficiencies, that could lead to potential environmental regulatory violations identified in the triennial reviews so long as the Respondents and their facility operators correct any deficiencies identified in the course of such reviews within sixty (60) calendar days of the finalization of each triennial review report, or for good cause shown, within another period of time beyond sixty (60) calendar days, if approved by NMED.*



**Fiscal Year 2021 Reporting of Releases and Instances of Noncompliance with the  
Los Alamos National Laboratory Hazardous Waste Facility Permit -  
U.S. Department of Energy, National Nuclear Security Administration  
Los Alamos Field Office and Triad National Security, LLC**

Purpose and Scope

The purpose of the Second Triennial Review was to complete a comprehensive independent review of environmental compliance at LANL for six identified focus areas. Compliance responsibility is shared by key groups at LANL, with certain areas and permits handled by one or more of the groups.

Review Period

The Triennial on site review for 2021 was conducted by Parson's Enterprise Construction Management Services from June 21, 2021 through July 2, 2021. The potential deficiencies for Triad's Permitted units are included in Table 1 (highlighted in blue for reference).

Potential Deficiency/Pre-decisional Observation

Three potential deficiencies are included within Table 1 (highlighted in blue for reference).

Positive Observations

*"Overall, the LANL teams were very knowledgeable of both regulatory and LANL hazardous waste requirements. All were dedicated to continuous improvement in waste management especially around waste reduction. All LANL teams also shared a vision of working together to continually improve the program."*

Two positive observations were made related to an innovative secondary containment solution and the use of cone-shaped drum lids.

The Appendix of the Parson's Triennial Review contains the observations from the review and can be found at <http://permalink.lanl.gov/object/tr?what=info:lanl-repo/epr/ESHID-603660>.

Summary of Corrective Actions

As part of the LANL commitment to environmental, health, and safety (EHS) excellence and continuous improvement, the Permittees are dedicated to ongoing efforts to evaluate, refine, and optimize pollution prevention, waste minimization, and environmental management systems, processes, and tools to ensure compliance with the Permit. Facility operators, EHS subject matter experts, and waste management personnel continue to identify and implement corrective actions, such as a feedback process to confirm weekly inspections have been conducted, as a best management practice to ensure compliance.

Table 1.  
Fiscal Year 2021 Reporting of Releases and Instances of Noncompliance  
NA-LA/Triad

Date of Discovery	Permitted Unit	Noncompliance	Quantity of Material	Instances of Noncompliance	Period of Noncompliance	Steps Taken to Resolve
09/13/2021	N/A	An electronic mail (e-mail) notification of a submittal of a document required by Permit Section 1.15, Compliance Schedule, was not provided to persons on the e-mail notification list within 7 days. This is a noncompliance of Permit Section 1.15.	N/A	1	09/7/2021-09/13/2021	An email notification was not provided to persons on the distribution list within the required 10 days. The document was placed within the LANL Electronic Public Reading Room within the required time frame, however the email notification was not generated within the required time frame, per the normal process the e-mail notifications are generated. The Permittees are currently cross training personnel to decrease the likelihood of a delay in the submittal of documents to the LANL Electronic Public Reading Room.
06/22/2021	TA-55-479	During the Parson's triennial review, a drum in the permitted storage unit area had paperwork on the drum indicating the drum contained liquid; however, the drum was located in a non- liquid permitted storage area. The proper paperwork was found beneath the incorrect paperwork. This is a noncompliance of Permit Section 2.4.1.	N/A	1	6/22/2021 - 6/22/2021	The incorrect paperwork was immediately removed from the permitted storage area and placed in the correct area. The paperwork indicating liquids within the container was inadvertently left on the drum that it did not pertain to. This observation is closed.
06/22/2021	TA-55-479	During the Parson's triennial review, a storage cabinet was labeled with two labels, one stating "Empty" and the other "Hazardous Waste." Inside the cabinet, individual containers were labeled as being useable products and the cabinet did not contain any waste. This is a noncompliance with Permit Section 3.6.1.	N/A	1	6/22/2021 - 6/22/2021	The hazardous waste label was removed from the storage cabinet which is used to store products, paperwork and reference documents. This observation is closed.
06/22/2021	TA-55-480	During the Parson's triennial review, an inspection record form (IRF) from February 28, 2020 specified that the asphalt needed repair. A facility service record (FSR) was initiated (FSR #222436). The FSR was inadvertently cancelled and the repairs were not completed. This is a noncompliance of Permit Section 2.6.2.	N/A	1	2/28/2020 - 11/30/2021	A new work order (WO#699865-01) was initiated to repair the asphalt (i.e., cracking) after the boundary of the permitted area was improved. Road and grounds crew plan to complete work during the fall of 2021 when physical conditions allow. It should be noted that storage of waste containers does not occur where cracks are located. This observation is closed.
06/15/2021	TA-55-Pad	A waste stream profile (WSP) evaluation was performed and determined the waste did not meet requirements of a F001 EPA code. The F001 code was removed from the WSP in WCATS; however, the waste code was not immediately removed from the label on the waste containers. This is a noncompliance with Permit Section 2.12.2.	2 drums	1	09/24/2020-06/15/2021	The WSP change occurred in September 2020 and discovery of the noncompliance occurred in June 2021. Upon discovery, the labels were replaced to match the operating record. A procedure change is in draft to ensure that changes to the WSP profile must also include a change to the actual container label so that the container label and the operating record (WCATS) match. This procedure update is still under revision.
02/18/2021	TA-3-29-9010 TA-3- 29-9020	A weekly inspection was not performed due to the area where unit is located being closed off. This is a noncompliance of Permit Section 2.6.1.	N/A	1	02/15/2021-02/21/2021	The inspection was performed when the area was released and opened.
06/15/2021	TA-3-29-9020	A waste stream profile (WSP) evaluation was performed and determined the waste did not meet requirements of a F001 EPA code. The F001 code was removed from the WSP in WCATS; however, the waste code was not immediately removed from the label on the waste containers. This is a noncompliance with Permit Section 2.12.2.	9 drums	1	09/24/2020-06/15/2021	The WSP change occurred in September 2020 and discovery of the noncompliance occurred in June 2021. Upon discovery, the labels were replaced to match the operating record. A procedure change is in draft to ensure that changes to the WSP profile must also include a change to the actual container label so that the container label and the operating record (WCATS) match. This procedure update is still under revision.
08/30/2021	TA-3-29-9020	A container was not marked as shipped in the operating record. This is a noncompliance with Permit Section 2.12.2.	1 SWB	1	03/22/2021-08/30/2021	The operating record was corrected once the discrepancy was discovered.
09/28/2021	TA-3-29- 9020	A Standard Waste Box (SWB) was marked as "Mixed Transuranic Waste"(MTRU); however, further evaluation demonstrated there was no RCRA component in the waste. This is a noncompliance with Permit Section 2.12.2.	1 SWB	1	11/04/2019-09/30/2021	The hazardous waste label was removed and the operating record was corrected. The responsible group and waste management coordinator were reminded of the importance of proper labels on waste containers and an accurate operating record.
06/09/2021	TA-63	A waste stream profile (WSP) evaluation was performed and determined the waste did not meet requirements of a F001 EPA code. The F001 code was removed from the WSP in WCATS; however, the waste code was not immediately removed from the label on the waste containers. This is a noncompliance with Permit Section 2.12.2.	7 drums	1	09/24/2020-06/10/2021	The WSP change occurred in September 2020 and discovery of the noncompliance occurred in June 2021. Upon discovery, the labels were replaced to match the operating record. A procedure change is in draft to ensure that changes to the WSP profile must also include a change to the actual container label so that the container label and the operating record (WCATS) match. This procedure update is still under revision.



## **ENCLOSURE 2**

Fiscal Year 2021 Reporting of Releases and Instances of  
Noncompliance with the Los Alamos National Laboratory  
Hazardous Waste Facility Permit

U.S. Department of Energy, Environmental Management Los  
Alamos Field Office and Newport News Nuclear BWXT-Los  
Alamos, LLC

Date: DEC 01 2021

CERTIFICATION

Fiscal Year 2021 Reporting of Noncompliance and Releases for  
Newport News Nuclear BWXT-Los Alamos, LLC

CERTIFICATION STATEMENT OF AUTHORIZATION

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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 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."



Joseph Murdock, Program Manager  
Environment, Safety and Health  
Newport News Nuclear BWXT-Los Alamos, LLC

10/27/2021

Date



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HARCEK  
Date: 2021.11.02 16:46:59  
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M. Lee Bishop, Director  
Office of Quality and Regulatory Compliance  
U.S. Department of Energy  
Environmental Management  
Los Alamos Field Office

Date

## 1.0 INTRODUCTION

This report has been prepared by the U.S. Department of Energy (DOE) Environmental Management Los Alamos Field Office (EM-LA) and Newport News Nuclear BWXT-Los Alamos, LLC (N3B), collectively the Permittees, to meet the Los Alamos National Laboratory Hazardous Waste Facility Permit (the Permit) reporting requirement. Permit Sections 1.9.13 and 1.9.14 require reporting any non-threatening releases of hazardous waste or constituents from or at a permitted unit and all instances of noncompliance with the Permit. This report must be submitted by December 1 of each year.

This report addresses N3B-operator associated releases and instances of noncompliance from October 1, 2020, through September 30, 2021. There were no releases of hazardous waste or constituents from or within permitted areas. None of the instances of Permit noncompliance detailed in this report posed a potential threat to human health or the environment. With the exception of five containers with liquids, all noncompliance issues identified have either been corrected or are in the process of correction to compliant configurations. The five containers with liquids cannot immediately be placed on secondary containment because of the approved nuclear evaluation of the nuclear safety of the situation currently in place. However, multiple compensatory measures are in use, including daily inspections and the use of absorbent socks/pads around each container. Noncompliance concerns noted in the "Supplemental Environmental Project: Second Independent External Triennial Review" (Parsons 2021) are included in this report.

## 2.0 FACILITY INFORMATION

Owner and Operator:

United States Department of Energy  
Environmental Management Los Alamos Field Office  
1200 Trinity Drive  
Los Alamos, NM 87544  
(505) 257-7950

Co-Operator:

Newport News Nuclear BWXT-Los Alamos, LLC  
1200 Trinity Drive, Suite 150  
Los Alamos, NM 87544  
(505) 661-5918

Facility:

Technical Area 54  
Los Alamos National Laboratory  
Mesita del Buey Road  
Los Alamos, NM 87545  
(505) 661-5918



### **3.0 RELEASES FROM OR WITHIN A PERMITTED UNIT**

During the period of October 1, 2020, through September 30, 2021, there were no releases at or from a permitted unit under N3B management.

### **4.0 INSTANCES OF PERMIT NONCOMPLIANCE**

From October 1, 2020, through September 30, 2021, 10 instances of Permit noncompliance were documented and are listed in Table 1.

### **5.0 PARSONS TRIENNIAL REPORT**

#### **5.1 Background**

In 2014, an improperly packaged drum of transuranic waste originating at the Los Alamos National Laboratory (LANL) built up pressure and released radiation into the environment at the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico. WIPP closed for necessary investigation and repairs and reopened in 2017. Based on the investigation results, the New Mexico Environment Department (NMED) issued the LANL Order for alleged hazardous waste and regulatory violations of the LANL Hazardous Waste Facility Permit. The co-permittees (U.S. Department of Energy [DOE] and the LANL management and operations contractor) entered into a settlement agreement to resolve the alleged violations. The settlement agreement, Section 11.B.38 (in part), states:

The Respondents, their constituent agencies, contractors, and affiliates agree to address any potential regulatory violations identified in the triennial reviews. NMED agrees to refrain from taking any enforcement action against the Respondents, their constituent agencies, contractors and affiliates for any potential regulatory violations, or operational deficiencies, that could lead to potential environmental regulatory violations identified in the triennial reviews so long as the Respondents and their facility operators correct any deficiencies identified in the course of such reviews within sixty (60) calendar days of the finalization of each triennial review report, or for good cause shown, within another period of time beyond sixty (60) calendar days, if approved by NMED.

#### **5.2 Purpose and Scope**

The purpose of the second triennial review (Parsons 2021) was to complete a comprehensive independent review of environmental compliance at LANL for six identified focus areas. Compliance responsibility is shared by key groups at LANL, with certain areas and permits handled by one or more of the groups.

#### **5.3 Review Period**

The triennial on-site review for 2021 was conducted by Parsons Enterprise Construction Management Services from June 21, 2021, through July 2, 2021. The final report was issued on September 30, 2021, and the potential environmental regulatory violation results for N3B's Permitted units (Attachment 1) are summarized below and highlighted in Table 1 for ease of the NMED Hazardous Waste Bureau's review.

## **6.0 SUMMARY OF IMPROVEMENTS**

N3B continues to develop new and improved waste management policies and procedures to ensure that operations comply with the Resource Conservation and Recovery Act (RCRA) Permit. N3B is working to improve the identification of Permit noncompliance to prevent recurrence. In addition, staff recently received refresher training for inspection and labeling procedures, and attended workshops to promote RCRA permit knowledge for CH-TRU (Contact-Handled Transuranic Waste) staff. These refresher trainings are ongoing. N3B recently added additional personnel to serve as RCRA inspectors and implemented human and organizational performance improvement (HPI) tools to ensure containers are stored in compliance with the Permit. HPI tools include the use of large blue stickers on containers with liquids for easy of identification.

## **7.0 REFERENCE**

Parsons Enterprise Construction Management Services, September 2021. "Supplemental Environmental Project: Second Independent External Triennial Review," BPA Number: DE-NA0002895, Order Number: 89233121FNA000084, Los Alamos, New Mexico. (Parsons 2021)

**Table 1**  
**Fiscal Year 2021 Noncompliance Report for N3B**

Date of Discovery	TA-54* Permitted Unit Location	Permit Section	Noncompliance Description	Days Out of Compliance	Corrective Actions Taken/Additional Information
10/19/2020	TA-54 Area G Dome 33	Permit Condition 3.6(2)	During a spot check, one drum was found to not be labelled with a "Free Liquids" label. The label was not provided within 24 hours.	2	The new "Free Liquids" label was placed on the drum on 10/21/2020.
4/27/2021	TA-54 Dome 49	Permit Condition 2.8.1(8)	During an extent of condition evaluation, 51 containers of ignitable and reactive wastes (D001 and/or D003) were stacked in excess of two high.	16	NMED was notified of this noncompliance by email on 4/29/2021. The drums could not be moved immediately because of safety basis restrictions on container movements. All containers were authorized for movement to compliant configuration on 5/13/2021.
6/29/2021	54-032	Permit Condition 3.6(1)	During an independent review (Parsons 2021), a drum with a hazardous waste label was found to lack an accumulation start date. Further investigation revealed the container had been recently repackaged and the accumulation start date was inadvertently left off the label.	7	The label was corrected to include a start date of 6/22/2021. This issue was summarized as observation HW-030 in Appendix E of the Parsons report (Parsons 2021) and provided in Attachment 1.
6/29/2021	54-033, 54-283, Pad 10	Permit Condition 2.5.1	During an independent review (Parsons 2021), it was found that warning signs were faded and several signs were missing.	54	After a delay finding the correct signs in sufficient quantity, new signs were ordered and, once received, were installed during the week of 8/23/2021. This issue was summarized as observation HW-033 in Appendix E of the Parsons report (Parsons 2021) and provided in Attachment 1.
6/29/2021	TA-54 Dome 153	Permit Condition 3.12.2.1	During an independent review (Parsons 2021) it was found that during a rain event, storm water intrusion was occurring from underneath the perimeter curb on the southeast corner of Dome 153.	7	Sand bags were put in place to prevent water from running underneath the perimeter curb on 7/6/2021. Curbing was repaired during the week of 8/23/2021. Completion of this task was delayed because of internal work planning processes and staff availability. This issue was summarized as observation HW-034 in Appendix E of the Parsons report (Parsons 2021) and provided in Attachment 1.
6/29/2021	TA-54 Dome 33, 54-0035, 54-0036, 54-0058 and Pad 10	Permit Condition 3.7.1(3)	During an independent review (Parsons 2021), the secondary containment sealant coating on the floor surface in Dome 33, 54-0035, 54-0036, and 54-0058 was identified as peeling, exposing concrete in areas and a previously repaired crack in the asphalt on Pad 10 that had redeveloped.	55	The potential for hazardous waste to enter the environment through cracks in the flooring was eliminated by removing all hazardous waste in building 33 on 7/26/2021. The sealant in Dome 33 was recoated and the recurring crack in Pad 10 was resealed during the week of 8/23/2021. Sealant product information and manufacturer recommendations were filed in the site's Facility Operating Record. At the time of discovery, no waste was or has been stored in 54-0035, 54-0036, or 54-0058 and signs were posted to prevent the future use of these areas for hazardous waste storage until the affected areas can be resealed. These issues were summarized as observation number HW-029 in Appendix E of the Parsons report (Parsons 2021) and provided in Attachment 1.
6/29/2021	TA-3, Building 271	Permit Condition 2.10.1	During an independent review (Parsons 2021), no spill kit was available. Waste included acids.	32	A spill kit was located at the Sample Management Office (SMO); however, it was not fully dedicated to the satellite accumulation area (SAA). For best management practices, a dedicated second spill kit with appropriate supplies (including measures for cleaning up acids) was acquired and added to the SAA on the week of 8/2/2021. This issue was summarized as observation HW-039 in Appendix E of the Parsons report (Parsons 2021) and provided in Attachment 1.
6/30/2021	TA-54, Areas G and L	Permit Condition Attachment E, (RCRA inspection record form) IRF	During an independent review (Parsons 2021), inconsistencies were noted with the completion/use of inspection forms. It was found that the weekly and daily RCRA IRFs were not filled out correctly at Area G. One IRF was used for multiple permitted units in Area L (each permitted unit needs its own IRF) and the use of "NRC" (non-regulatory concern) was used as a marking when "AR" (action required) was required.	pending	Procedure N3B-DOP-TRU-1219, Rev. 1, "RCRA Inspections and Notifications," is being revised as follows: "a review requirement by SMO or EP will be added, multiple IRFs will be required for Area L, a qualification requirement for implementation of the procedure will be added, the use of NRC on the inspection will be excluded, and corrective actions for identified issues will be added." The term NRC was discontinued from use on 10/4/2021 so the term would not be confused with the term AR. Only OK, NA (not applicable), or AR are terms currently in use. Once the procedure is finalized, CH-TRU Environmental personnel will perform training on the proper way to fill out the IRF and an extent of condition. These issues were summarized as observations HW-036, HW-038, HW-040, and HW-043 in Appendix E of the Parsons report (Parsons 2021) and provided in Attachment 1.
8/4/2021	TA-54 Dome 48	Permit Condition 3.7.1/3.12.1(2)	During a spot check, one container with a D002 waste code was not on secondary containment.	pending	NMED was notified of this noncompliance by email on 8/5/2021. The drum cannot be moved immediately as it is near a high fissile gram equivalent (FGE) area. Compensatory measures include the use of absorbent socks placed around the container, an absorbent pad placed underneath, and daily inspections until the container can be moved to secondary containment.
9/27/2021	TA-54 Domes 48, 232 and 283	Permit Condition 3.7.1/3.12	During an extent of condition evaluation, four containers with free liquids were not on secondary containment.	pending	NMED was notified of this noncompliance by email on 10/6/2021. The drums cannot be moved immediately as they are located near or are a high FGE drum. Compensatory measures include the use of absorbent socks placed around each container, absorbent pads placed underneath, and daily inspections until these containers can be moved to secondary containment.

\* TA-54 = Technical Area 54.





# **Attachment 1**

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*Parsons Second Triennial Review Observation Forms*

## SEP – Second Triennial Review Observation Form

*PRE-DECISIONAL***Observation No.:** HW-029**Category:** Maintenance**Observation Title:** Secondary Containment Maintenance**Observation Type:** II - Potential Environmental Regulatory Violation**Date:** 6/29/2021**Technical Area:** 54**Location:** 033, 036 and Pad 10**Operational Entity:** N3B**Reference:** Permit Section 3.7.1(3)**Requirement:**

The Permittees shall maintain the base of secondary containment systems to ensure they are impervious in order to contain leaks, spills, and/or accumulated precipitation until the collected liquids are detected and removed.

**Notes:**

Secondary containment sealant coating was peeling, exposing concrete in 54-033 and 54-036. Pad 10 area had several corrected cracks and gaps, and repairs are ongoing. However, the Pad 10 area included one area which had previously repaired asphalt but included a crack and gap in the asphalt.

**Recommendation:**

Re-coat Secondary Containment with appropriate sealant following its manufacturer's requirements. Keep a record of manufacturer's requirement in accordance with Permit Section 3.7.1(4). Fill crack and gaps with appropriate sealant.

**Response:**

Cracks and floors sealed week of 8/23/2021 for permitted areas TA54-033 and Pad 10. Sealant manufacturer's requirements maintained in site's Facility Operating Record in accordance with Permit Section 2.12.2(15). For permitted area TA54-036, a temporary sign was placed in the area indicating "No Hazardous Waste Storage" to allow secondary containment unit repairs later.

**Status:** Closed**Reviewer:** Mark Vetter and Ken Rice



## SEP – Second Triennial Review Observation Form

*PRE-DECISIONAL***Observation No.:** HW-030                      **Category:** Labeling**Observation Title:** Labeling inaccurate or incomplete**Observation Type:** II - Potential Environmental Regulatory Violation**Date:** 6/29/2021**Technical Area:** 54                      **Location:** 32**Operational Entity:** N3B**Reference:** Permit Section 3.6.1**Requirement:**

The Permittees shall ensure that all containers storing hazardous waste have a "Hazardous Waste" label (see 40 CFR § 262.34(a)(3)) that lists the generator's name, address, and EPA Identification number, the date the container was placed in storage at the permitted unit (see 40 CFR § 262.34(a)(2)), and all applicable EPA Hazardous Waste Number(s) (see 40 CFR § 268.50(a)(2)(i)).

**Notes:**

Drum with Hazardous Waste label lacked an accumulation start date.

**Recommendation:**

Include accumulation start date on label.

**Response:**

Label was corrected to include a start date of 6-22-2021

**Status:** Closed**Reviewer:** Ann Logue



## SEP – Second Triennial Review Observation Form

*PRE-DECISIONAL*

**Observation No.:** HW-034                      **Category:** Storage

**Observation Title:** Stormwater run-on into permitted area

**Observation Type:** I - Operational Deficiency (not following LANL procedure)

**Date:** 6/29/2021

**Technical Area:** TA-54              **Location:** Permitted Dome 153

**Operational Entity:** N3B

**Reference:** Permit Section 3.12.2.1

**Requirement:**

The Permittees shall repair the 6-inch-high, 8-inch-wide curb at the perimeter of Domes 153 and 283 to prevent run-on/run-off to and from the permitted unit.

**Notes:**

During a rain event, it was noted that stormwater intrusion was occurring from underneath the perimeter curb on the southeast corner of Dome 153.

**Recommendation:**

Repair curb to prevent stormwater run-on into permitted area.

**Response:**

Curbing repaired week of 8/23/2021.

**Status:** Closed

**Reviewer:** Ken Rice



## SEP – Second Triennial Review Observation Form

*PRE-DECISIONAL***Observation No.:** HW-036**Category:** Inspections**Observation Title:** Inspection Checklist Inaccuracy**Observation Type:** II - Potential Environmental Regulatory Violation**Date:** 6/30/2021**Technical Area:** TA-54**Location:** Dome 229**Operational Entity:** N3B**Reference:** Attachment E Section E.1.1**Requirement:**

The Permittees shall conduct and record inspections in Parts I and II of the IRF for each working day or week that waste is opened, moved, received, stored, treated, removed, or remains open, as appropriate.

**Notes:**

The inspection form for Area G Dome 229 dated May 4, 2020 indicated that waste was stored in Dome 229 on May 5. However, all subsequent checklist items were marked NA and not inspected.

**Recommendation:**

Implement an inspection form review process prior to signing off on inspection. Utilize personnel with RCRA training and permit familiarity to complete inspections.

**Response:**

Received revised procedure N3B-DOP-TRU-1219 Rev 1, RCRA Inspections and Notifications on 8/26/2021. Revised procedure incorporates requirements for reviewing the completeness of the inspection by the Shift Operations Manager or Environmental Professional. The procedure also identifies requirement for qualified and trained nuclear operator, environmental professional, and waste management professional to perform this procedure:

**Status:** Closed**Reviewer:** Mark Vetter

**SEP – Second Triennial Review Observation Form*****PRE-DECISIONAL*****Observation No.:** HW-038**Category:** Inspections**Observation Title:** Action Items from Inspections**Observation Type:** II - Potential Environmental Regulatory Violation**Date:** 6/30/2021**Technical Area:** TA-54**Location:** Area G**Operational Entity:** N3B**Reference:** Attachment E Sections 1.2**Requirement:****E.1.2 Actions Resulting from Inspections**

If the Permittees discover any defects, deterioration, operator errors, discharges, or potential hazards during an inspection, the Permittees shall complete appropriate corrective measures (e.g., transfer of waste from a defective container to an appropriate container in good condition, repair or replacement of nonfunctioning equipment and/or systems, or removal of any accumulated liquids) promptly so that the problem does not lead to an environmental or human health hazard. The Permittees shall note any action taken in response to an inspection on the IRF or IRF documentation.

If a hazardous condition is imminent or has already occurred, the Permittees shall assess the condition immediately and follow up with appropriate remedial action. If this assessment indicates that human health or the environment may be or may have been adversely affected, the Permittees may implement Permit Attachment D, (Contingency Plan). In any case, the Permittees shall document the remedial action that is required and is taken.

**Notes:**

Several Items identified during inspections as deficiencies are outstanding, some from 2018. These include concrete cracks, asphalt cracks, uninspected windsocks, floor paint chipping, fabric ripped, door signs faded. These are identified as NRCs and not ARs.

**Recommendation:**

Address action items as soon as possible and close out action items. For example, if cracks are sealed, close the action item. If cracks are observed during a subsequent inspection, create a new action item.

Items identified for action that are deficiencies identified during weekly inspections should be labeled as ARs. NRC is not a permit term in Attachment E.

Conduct inspections using personnel with RCRA training and who are familiar with RCRA and the Permit requirements.

**Response:**

Received revised procedure N3B-DOP-TRU-1219 Rev 1, *RCRA Inspections and Notifications* on 8/26/2021. Revised procedure excludes the use of NRC on the inspection forms and outlines what should be done when actions are identified and what should be documented for closing out the actions. The procedure also identifies requirement for qualified and trained nuclear operator, environmental professional, and waste management professional to perform this procedure.

**Status:** Closed**Reviewer:** Mark Vetter



## SEP – Second Triennial Review Observation Form

*PRE-DECISIONAL***Observation No.:** HW-039**Category:** Release/Spill**Observation Title:** Spill Kit**Observation Type:** II - Potential Environmental Regulatory Violation**Date:** 6/30/2021**Technical Area:** TA-03**Location:** SAA 6611**Operational Entity:** N3B**Reference:** 40CFR 262.252(c)**Requirement:**

Locate equipment necessary to prepare for and respond to emergencies: spill control equipment

**Notes:**

No spill kit available. Waste included acids.

**Recommendation:**

Spill kits should be available and appropriate for waste being accumulated.

**Response:**

Acquired spill kit with appropriate supplies week of 8/2/2021.

**Status:** Closed**Reviewer:** Amy Swiecichowski



**SEP – Second Triennial Review Observation Form****PRE-DECISIONAL****Observation No.:** HW-040**Category:** Inspections**Observation Title:** Container Storage Unit Inspections**Observation Type:** II - Potential Environmental Regulatory Violation**Date:** 6/30/2021**Technical Area:** TA-54**Location:** Area L**Operational Entity:** N3B**Reference:** Attachment E Section E.2.2 Weekly**Requirement:**

The Permittees shall conduct weekly inspections of CSUs every week that waste remains in storage. The Permittees shall inspect and record the following items, as applicable:

1. General IRF information (Items 1-7)
2. Communications equipment
3. Warning signs
4. Security
5. Work surfaces/floors
6. Spill/fire equipment
7. Eyewashes/safety showers
8. Windsock
9. Secondary containment structures
10. Run on and runoff control
11. Covers and lids of containers
12. Labels
13. Accumulation start date
14. Compatibility

**Notes:**

Area L only had one inspection sheet for the entire area. Individual CSUs were not identified on the inspection form.

**Recommendation:**

Complete a separate inspection form for each CSU in Area L. Utilize personnel familiar with permit and RCRA regulations to complete inspection.

**Response:**

Received revised procedure N3B-DOP-TRU-1219 Rev 1, *RCRA Inspections and Notifications* on 8/26/2021. Revised procedure included requirement for a minimum of five separate inspection record forms for the 10 permitted units within Area L. Trained and qualified personnel will perform the inspections.

**Status:** Closed

**Reviewer:** Mark Vetter

## SEP – Second Triennial Review Observation Form

*PRE-DECISIONAL***Observation No.:** HW-043**Category:** Inspections**Observation Title:** Permit IRF Form Data Recording**Observation Type:** I - Operational Deficiency (not following LANL procedure)**Date:** 6/30/2021**Technical Area:** TA-54**Location:** Areas L and G**Operational Entity:** N3B**Reference:** Attachment E Section E.1.1**Requirement:**

The Permittees shall follow the inspection schedules outlining the items to be addressed on the Permittees' Hazardous Waste Facility Inspection Record Form (IRF) and inspection frequencies for the unit types provided in this Attachment's Sections E.2 through E.8, and in TA-specific Attachment E sections. The IRF and instructions for its completion are provided at the end of this Attachment Section; the form may be supplemented, changed, or otherwise replaced through a permit modification pursuant to 40 CFR § 270.42(a). The IRF lists the items to be inspected.

**Notes:**

The inspection forms reviewed for several of the CSUs utilized terms not referenced in Attachment E including using NRC for action items. Inspection records identified most finds as NRC. Observations identified during this review were all of a regulatory concern because the inspection forms are specified in the hazardous waste permit.

**Recommendation:**

Discontinue use of NRC and complete inspections according to the requirements of Attachment E.

**Response:**

Received revised procedure N3B-DOP-TRU-1219 Rev 1, *RCRA Inspections and Notifications* on 8/26/2021. It included an updated IRF that met the requirements of Attachment E of the Hazardous Waste Facility Permit.

**Status:** Closed

**Reviewer:** Mark Vetter

*[The following text is extremely faint and largely illegible. It appears to be a detailed report or review document, possibly containing sections such as 'Introduction', 'Background', 'Findings', and 'Conclusions'. The text is mirrored and difficult to read.]*