

Associate Laboratory Directorate for Environment, Safety, Health, & Quality Los Alamos National Laboratory P.O. Box 1663, MS M325 Los Alamos, NM 87545 505-667-4218



National Nuclear Security Administration

Los Alamos Field Office 3747 West Jemez Road, A316 Los Alamos, NM 87544 505-667-5794/Fax 505-606-5948

> Symbol: ALDESHQ-25-041 Date: August 22, 2025

Mr. James C. Kenney, Secretary New Mexico Environment Department Harold Runnels Building 1190 St. Francis Dr. Suite N4050 Santa Fe, NM 87505

Subject: Los Alamos National Laboratory's Flanged Tritium Waste Container Temporary Authorization Request and Mitigation Project is Compliant with Law and Protective of Worker Safety, Public Health, and the Environment, and Should be Approved by August 29, 2025

Dear Mr. Kenney:

Please accept this letter and attachments as the National Nuclear Security Administration (NNSA) and Triad National Security, LLC (Triad) (collectively, the Permittees) response to your letter of June 9, 2025. The Permittees wrote the New Mexico Environment Department (NMED) on April 4, 2025 seeking temporary authorization to store and repackage four Flanged Tritium Waste Containers (FTWCs) at the Weapons Engineering Tritium Facility (WETF) following depressurization at Area G (the TA Request). NMED's response letter on June 9, 2025 detailed four criteria for NNSA to address "significant public interest" in the planned depressurization. We thank NMED staff for their collaboration and oversight so all involved can attest the process served the public's right to know about this proposed operation.

The Permitees address the four criteria below, with supporting documentation accompanying this letter:

1. Independent Technical Review. The Permittees shall obtain an independent, third-party technical review for alternative options for depressurization of the FTWCs. The independent, third-party technical review report shall be provided to the U.S. Environmental Protection Agency (EPA) Region 6 and the NMED. Such a report shall be a matter of public record and made available to the public on the Permittees website.

On August 12, 2025, the Permittees provided an independent technical review (ITR), drafted by federal Environmental Safety and Health experts and reviewed by an NMED selected subject matter expert (SME). The report discussed the various alternatives and concluded that



depressurization in place at Area G "provide[d] the safest option to workers, the public, and the environment and poses very low risk of offsite exposure to the public." The report also stressed the necessity of timely action to reduce pressure deliberately in highly controlled conditions.

The Permittees acknowledge the time and resources nongovernmental organizations invested in developing independent reports and engaging in public discussion on the planned operations. Experts within the nuclear security enterprise, inside and external to the Laboratory, reviewed the reports and evaluated the points raised. We share the desire for a safe, effective approach to resolve the issues presented by the FTWCs.

The independent technical review was provided to EPA, made available on the Laboratory's website, and made available to the public in advance of the August 20, 2025, public meeting. The ITR is included as Enclosure 1.

2. Public Meeting. The Permittees shall host a public meeting for interested stakeholders. The public meeting must include a review of the independent, third-party technical review for alternative options; the preferred treatment process; and a discussion of the safety mechanisms and contingencies that will be utilized to ensure the protection of human health and the environment during operations. The public meeting must provide an opportunity for the public to ask questions and receive answers or to provide comments for the consideration by the Permittees. The Permittees shall provide at least (7) business days of public notice prior to hosting the public meeting and shall provide reasonable accommodation for meaningful participation.

A summary of the meetings is attached as Enclosure 3. The Permittees discussed the ITR and offered SMEs to answer numerous questions from an in-person audience and from virtual attendees participating via Zoom®. The Permittees considered the public input and provided additional technical information on the Laboratory's website as a result of this meeting.

3. Tribal Consultation. The Permittees shall host a tribal consultation with interested tribal governments related to the independent, third-party technical review for alternative options; the preferred treatment process; and a discussion of the safety mechanisms and contingencies that will be utilized to ensure the protection of human health, environment, and cultural practices. This is in addition to any tribal consultation conducted by the NMED.

NNSA held a collective tribal consultation on August 20, 2025. Twenty-seven tribes and pueblos were invited to participate in the consultation and the Pueblos of Santa Clara, San Ildefonso, Cochiti, Jemez, San Felipe, Pojoaque, Tesuque, and Nambe were in attendance. NNSA and Triad also held one-on-one technical exchange meetings with the Pueblos of San Ildefonso and San Felipe who requested individual meetings in response to a standing NNSA invitation from April of 2025 to provide individual briefings on the FTWC operation. Requisite information was provided (including the independent technical review), and discussion addressed alternative options, the preferred treatment process, and the safety mechanisms and contingencies used to ensure protection of human health, the environment, and cultural practices. The Permittees considered the tribal input and provided additional technical information on the Laboratory's website as a result of this meeting.

4. Compliance Audit. The Permittees shall retain an independent third-party auditor to conduct a hazardous waste compliance audit of its operations. The independent, third-



party auditor review report shall be provided to NMED. Such a report shall be a matter of public record and made available to the public on the Permittees website.

NMED addressed the scope required at length with NNSA and Triad staff prior to completion and submission of the audit to ensure the scope met expectations. NNSA and Triad submitted the independent, third-party FTWCs compliance audit August 16, 2025, to NMED. The results are consistent with earlier compliance reviews, confirming that the FTWCs have been managed in a safe and compliant manner consistent with the New Mexico Hazardous Waste Act and its implementing regulations codified at 20.4.1 of the New Mexico Administrative Code.

The FTWCs compliance audit has been made available to the public on the Laboratory's website and is included herein as Enclosure 2. Significantly, the audit's conclusions echo the overall finding of NMED's most recent inspection, attached as Enclosure 4. The findings of no violations discovered or observed from both the independent assessment and the formal and rigorous inspection validate the Permittees investment and operations in compliance with NMED's requirements.

We request you accept this, combined with the administratively complete TA request of April 4, 2025, as the Permittee's resubmission under your letter of June 9, 2025. We request a decision on the TA Request by August 29, 2025. Timely authorization to proceed is needed to ensure the maximum margin of safety possible in conduct of the operations. NMED's expedited action would also facilitate NNSA's express commitment to notify the public prior to depressurization and to hold public and tribal meetings upon conclusion of the operations.

Once again, the Permittees thank the staff of NMED, whose focus on the citizens of New Mexico echoes in the critical work performed at Los Alamos National Laboratory.

If you have any questions or comments concerning this response document and invocation of dispute resolution, please contact Robert A. Gallegos (NA-LA) at (505) 901-3824 or by email at robert.gallegos@nnsa.doe.gov or Luciana Vigil-Holterman (Triad) at (505) 665-3435 or by email at luciana@lanl.gov.

Sincerely,

Mark Davis Davis Date: 2025.08.21 17:28:15 -06'00'

Mark Davis
Deputy Laboratory Director for Operations
Los Alamos National Laboratory
Triad National Security, LLC

Sincerely,

Theodore A. Digitally signed by Theodore A. Wyka Date: 2025.08.21 18:14:50 -06'00'

Theodore A. Wyka
Field Office Manager
U.S. Department of Energy
National Nuclear Security Administration
Los Alamos Field Office

SAC/RAG

Enclosures: 1) Flanged Tritium Waste Container Depressurization Independent Technical Report

Longenecker & Associates Audit Report Audit No. Triad WR12 T16
 A

3) Meeting Summaries: Public Meeting, San Ildefonso, San Felipe, Open Tribal Meeting



4) New Mexico Environment Department Hazardous Waste Bureau Inspection Report, September 23, 2024

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Received

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NMED Hazardous Waste Bureau





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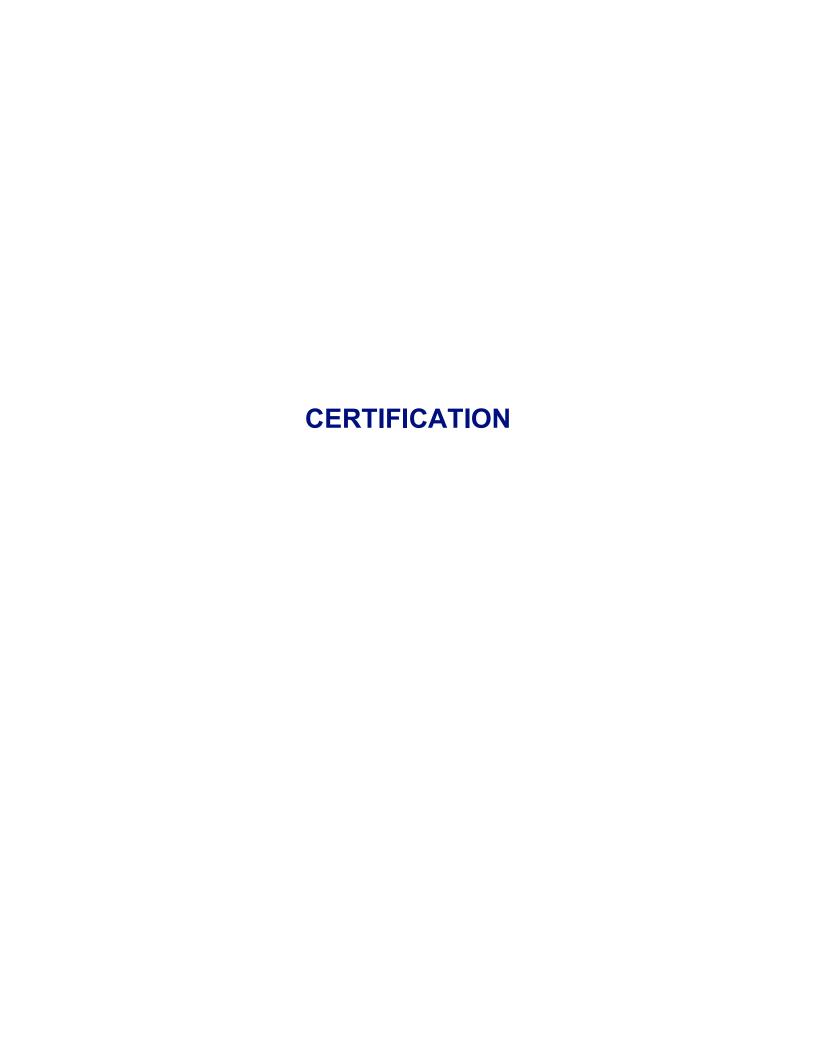
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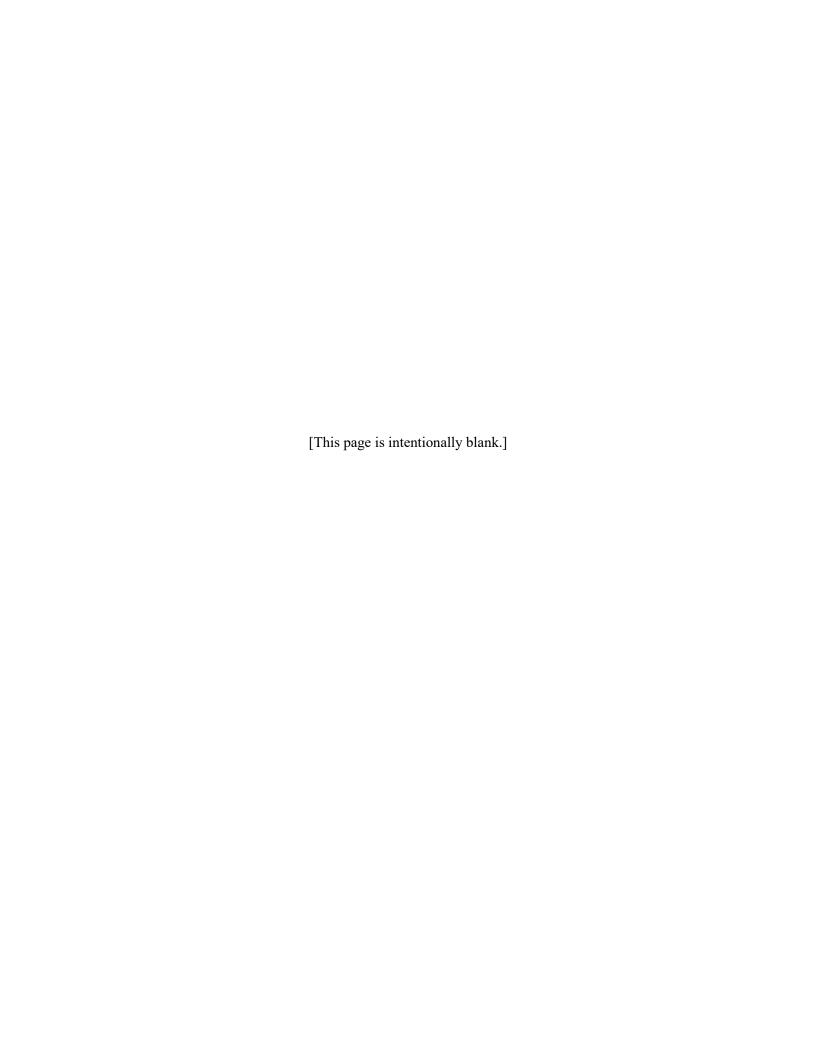
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Certification

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.

Mark E. Davis Digitally signed by Mark E. Davis Date: 2025.08.22 06:47:18 -06'00'

August 22, 2025

Date Signed

Mark Davis

Deputy Laboratory Director for Operations Los Alamos National Laboratory Triad National Security, LLC

Digitally signed by THEODORE A.

WYKA

Date: 2025.08.22 05:51:47 -06'00'

August 22, 2025

Theodore A. Wyka

Manager U.S. Department of Energy National Nuclear Security Administration Los Alamos Field Office U.S. Department of Energy

Date Signed



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ENCLOSURE 1

Flanged Tritium Waste Container Depressurization Independent Technical Report

Date: August 22, 2025

ALDESHQ-25-041

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



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JOINT STATEMENT ON THE ISSUANCE OF THE FLANGED TRITIUM WASTE CONTAINER DEPRESSURIZATION INDEPENDENT TECHNICAL REVIEW

The National Nuclear Security Administration (NNSA) Los Alamos Field Office (NA-LA) commissioned this report at the urging of the New Mexico Environment Department (NMED). Readers may find more details on the Flanged Tritium Waste Containers (FTWCs) timeline here and here.

NMED requested NNSA demonstrate the Agency arrived at FTWCs depressurization onsite after due consideration of alternatives and assure the public of the safety of the proposed solution. NMED established four criteria in order to provide the most relevant information to the public: 1) Independent Technical Review, 2) Public Meeting, 3) Tribal Consultation, and 4) Compliance Audit. NMED directed that the independent technical review evaluate all available courses of action, including alternatives to depressurization and alternatives not considered by LANL.

NNSA's Environmental Health and Safety (ES&H) performed the independent technical review in collaboration with a subject matter expert (SME) selected by NMED. Safety assessments form a key part of the ES&H mission. These evaluations often turn on precisely the issues most relevant to the planned FTWC depressurization operations. The ES&H SMEs possess a combined total of over 120 years' experience in nuclear safety matters, including radioactive material packaging and transportation, tritium operations, and radiation protection. ES&H authors played no part in the initial development of alternatives or evaluation of the proposed operations.

NMED also selected a SME to review the ES&H team's work. Craig Junio, a chemical engineer from Oak Ridge, Tennessee, provided review and analysis of the various options including depressurization and its alternatives. NMED sought to engage a truly independent reviewer; Craig Junio had no previous employment by or for LANL.

Craig Junio has experience in project management/planning regarding environmental sciences and engineering, environmental compliance, and health and safety to provide an outside and completely independent review of proposed depressurization process. Mr. Junio has a background in hazardous and radioactive waste characterization, treatment, disposal methods, and applicable requirements, and has extensive experience with low-level, mixed waste, and transuranic (TRU) waste characterization, profile development, and classification for treatment and disposal on the Nevada Test Site (NTS, now known as the Nevada National Security Site) and off-site facilities.

Craig Junio reviewed the ES&H draft report, posed numerous questions and commented extensively on the text. Adopting a collaborative approach to NMED's request that the report provide a "technical review for alternative options for the depressurization of the FTWCs," the SMEs arrived at a consensus. This report is the result.

The report confirms the selection of depressurization in place before transportation onsite for further processing. The experts also agreed on the urgency of action and the necessity of timely action to reduce pressure deliberately in highly controlled conditions.





NA-ESH

Flanged Tritium Waste Container Depressurization

Independent Technical Report

August 12, 2025

APPROVED FOR PUBLIC RELEASE

This document has been approved for released to the public by NNSA Office of Defense Nuclear Security (NA-70) and Office of Communications (NA-COMM) as of August 12, 2025.

INNOVATE. COLLABORATE. DELIVER.



Acronym List

Acronym Definition

CAP88 Clean Air Act Assessment Package - 1988

CVF Controlled Venting Fixture
DOE Department of Energy
DOT Department of Transportat

DOT Department of Transportation
FTWC Flanged Tritium Waste Container
LANL Los Alamos National Laboratory

NA-ESH NNSA Office of Environment, Safety, and Health

NA-LA NNSA Los Alamos Field Office

NESHAPs National Emission Standards for Hazardous Air Pollutants

NMED New Mexico Environment Department NNSA National Nuclear Security Administration

PMM Pressure Monitoring Manifold psi pounds per square inch SME Subject Matter Expert

TA Tech Area

Triad Trian National Security, LLC

TSDF Treatment, Storage, and Disposal Facility WETF Weapons Engineering Tritium Facility





Table of Contents

1.	Background	2
2.	Approach for the Independent Technical Review	
3.	Evaluation of Alternatives	
3	1 Leave in Place	3
3	2 Transport First Then Depressurize	4
3	3 Depressurize Then Transport	4
4.	Other Considerations	5
4	1 Radiation Exposure to the Public	5
4	2 Worker Safety Considerations	6
4	3 Controlled Depressurization Process	6
4	4 Onsite Transfer Operations	8
5.	Conclusions	8
5	1 Leave in Place Alternatives	9
5	2 Transfer from Area G to Another Facility for Depressurization	9
5	3 Depressurize the FTWCs at Area G and Transfer to Another LANL Facility	9
6.	Recommendation	10
API	ENDIX A: References	11



1. Background

Four (4) Flanged Tritium Waste Containers (FTWCs) containing tritium-contaminated waste items and expended squib valves are stored at Los Alamos National Laboratory (LANL) at Technical Area (TA) 54, Pad 5, Building 1028 (Area G) pending waste processing and treatment prior to permanent offsite disposal. In March 2020, the Department of Energy (DOE) National Nuclear Security Administration (NNSA) Los Alamos Field Office (NA-LA) and Triad National Security, LLC (Triad) resubmitted a request to the New Mexico Environment Department (NMED) for temporary authorization to treat, stage, and repackage four containers at Area G. If the permit is issued, the four FTWCs will be depressurized at Area G, transferred onsite to TA-16 Building 205 Weapons Engineering Tritium Facility (WETF) for processing, then transported to a commercial Treatment, Storage, and Disposal Facility (TSDF) for disposal.

In April 2025, NA-LA and Triad submitted a notification of planned start of the temporary authorization request. The NMED's response in June 2025 stated that NMED would not act on the temporary request until four criteria were successfully completed by NA-LA and Triad. The criteria were conducting an Independent Technical Review, Public Meeting, Tribal Consultation, and Compliance Audit. NMED directed that the focus of the independent technical review should be evaluation of alternatives, including alternatives not considered by LANL.

NA-LA requested assistance from NNSA's Office of Environment, Safety, and Health (NA-ESH) in performing the independent technical review. The Independent Technical Review Team (Team) consists of NA-ESH and Savannah River National Laboratory subject matter experts (SMEs) in packaging and transportation, tritium operations, and radiation protection. The Team members have not previously been involved in the development of alternatives or evaluation of the proposed operations.

2. Approach for the Independent Technical Review

The Team performed document reviews; discussed proposed alternatives and FTWCs treatment operations with LANL employees directly involved in tritium operations; completed an onsite review of the planned depressurization and pressure monitoring activities; reviewed and evaluated alternatives considered by LANL; and considered other potential alternatives. This report uses the term "depressurize" to describe the controlled process to relieve pressure in the FTWCs headspace, i.e., controlled venting, and "vent" to describe the unplanned, unmitigated release of pressure from the FTWCs.

3. Evaluation of Alternatives

The primary hazards of concern associated with the FTWC depressurization and handling activities are physical and radiological consequences to the facility worker from an overpressure wave of an unplanned, unmitigated FTWC content release and





subsequent radiological consequences to the public, co-located workers, and environment. There are four FTWCs in controlled storage at Area G. The FTWCs hold a mix of tritium contaminated parts and waste items including tritiated water on molecular sieve in AL-M1 containers, expended Tritium Waste Treatment System (TWTS) molecular sieve dryers, paint cans, and plastic bags; potential free-standing liquids; and lead styphnate contaminated squib valves (expended). The contents are well documented, and calculations indicate that the FTWCs contain a flammable hydrogen/oxygen mixture and that the headspace pressure is estimated to increase at a rate of ~5 psi per year.

The Team reviewed and discussed several alternatives. In determining the operational options and potential remediation methods to address the FTWC project, LANL used three guiding objectives to weigh options. The Team determined the objectives were reasonable as summarized below:

- Maximize the protection of the public and the environment.
- Prevent scenarios and conditions that could result in an uncontrolled, unmitigated, and unmonitored release of tritium.
- Ensure the safety of workers who are performing hands-on work.

The Team also evaluated the controlled depressurization process and onsite transfer operations that is proposed by LANL (see Section 4). The alternatives evaluated were grouped into three major categories of Leave in Place, Transport without Depressurization, and Depressurize then Transport. The categories are discussed below.

3.1 Leave in Place

Description: The options under this category involve leaving the FTWCs in place in their current configuration, building a mitigation structure around the FTWCs, placing the FTWCs in a containment vessel and leave in place for some duration to allow additional tritium decay to reduce the source term. The FTWCs could then be depressurized, transported, and disposed of at a commercial TSDF.

Discussion: Tritium's half-life is approximately 12.3 years. There are approximately 85,000 curies of tritium in the four FTWCs as of May 2025 and it will take about 125 years to reduce the concentration to 0.1% of the activity. As pressure continues to increase, the safety exclusion area around the FTWCs (for protection of both workers and the containers) will soon impact adjacent operating locations in Area G and pose greater risk if ultimately FTWC handling is required. Also, the risk of unmitigated release remains if the containers are damaged while remaining in long-term storage due to natural phenomena hazards (e.g., fire, lightning). Building a mitigation structure or placing the FTWCs into a separate container would introduce impact risk during construction/movement which can lead to an unmitigated/unplanned release and result in additional contaminated structures/containers. Continued surveillance and maintenance would be required if the configuration is left in place.





3.2 Transport First Then Depressurize

Description: Options under this category require onsite transfer using standard or remote handling configurations, using rolling roadblocks or full road closures or offsite transportation.

Discussion: Offsite transportation in commerce in the current configuration (FTWCs in an 85-gallon drum) would not comply with Department of Transportation (DOT) and Nuclear Regulatory Commission regulations. Offsite transportation would require a Type B package due to the quantity of tritium and the quantity of flammable gas would be restricted. External over-the-road transportation environments expose the FTWCs with increased pressure and flammable gas mixtures in the headspace to environments that could lead to unmitigated release. For onsite transport prior to depressurization, the transportation of the FTWCs with headspace pressure and gas mixture would have to be analyzed and approved for the increased hazards. There is little benefit to incurring the risk in transportation when alternatives exist to reduce the risk by depressurizing prior to transport. Having an unmitigated release on the road would complicate response activities.

3.3 Depressurize Then Transport

Description: Under this category, the FTWCs would be depressurized onsite at Area G using a controlled depressurization process. Both the Controlled Venting Fixture (CVF) and associated capture and monitoring equipment and potential dose consequences were independently evaluated by the Team's SMEs as discussed below and found to be reasonable, conservative, and technically sound.

Discussion: Performing the depressurization operations in place at Area G reduces the flammable hazards prior to transportation, reducing the likelihood of unmitigated release. After depressurization, the Pressure Monitoring Manifold (PMM), which is equipped with a pressure gauge, a vacuum gauge, a pressure-relief valve, and isolation valves, is placed on top of each FTWC. The subsequent transportation of the FTWCs is in a safe configuration to be moved to a facility with the capability and infrastructure to further process the FTWCs as needed before disposal. The depressurization operations will be managed to keep airborne emissions of radioactive material well below regulatory limits.

Prior to each day's work, operations staff will consult with LANL's meteorology program to ensure that day's forecasted weather is within the bounding conditions established when evaluating emissions limits and pause points. Depressurization is performed one drum at a time and controlled by incremental pressure relief operations (10 psi increments) with pauses in between pressure drops to allow for emissions tracking and system equilibration. Background sampling has been performed in 2025, and sampling will be repeated during and after depressurization operations to document downwind concentrations in the air and in soil at selected representative locations. The air stream is being monitored using an ion chamber to track real-time emissions (which does not differentiate between tritium in vapor form and elemental form) as well as a bubbler to





track the emissions of record for EPA compliance (which differentiates between tritium in vapor form and elemental form).

The LANL team considered forty (40) different alternatives under these broad categories. The evaluation team concludes that the selected alternative by LANL to depressurize the FTWCs in place to achieve a safe and stable configuration that minimizes the hazards prior to transportation provides the safest option to workers, the public, and the environment and poses very low risk of offsite exposure to the public.

4. Other Considerations

The Team evaluated the following areas related to selection of the alternative:

- Radiation exposure to public,
- Worker safety,
- Controlled depressurization process, and
- Onsite transfer operations.

4.1 Radiation Exposure to the Public

A primary concern in the selection of the preferred alternative is dose to the public. Any path forward must be safely executable and in compliance with regulation.

An unmitigated and unmeasured release is the least acceptable outcome from the perspective of a radiological release to the public and must be avoided.

DOE is required by 40 CFR 61.93(a) to use Environmental Protection Agency (EPA) approved methods like Clean Air Act Assessment Package – 1988, or CAP88, to demonstrate compliance with the National Emission Standards for Hazardous Air Pollution (NESHAP). CAP88 was designed for longer term or continuous releases. LANL is working to mitigate concerns about using it for a short-term release by using the more conservative of the wind conditions at the time of release and average conditions appropriate to continuous releases. LANL is in dialogue with EPA over this approach. CAP88 has relatively recently added the capability to calculate age-dependent radionuclide doses; however, EPA regulations do not require the use of the most restrictive values, and standard practice within the DOE and wider CAP88 user community is to use the adult values assumed in EPA regulations.

CAP88 was used during the planning of the project and will be used daily during operation as the FTWCs are depressurized to validate compliance.

CAP88 makes conservative assumptions such as:

- 1. All tritium is present as tritiated water vapor. Tritium vapor is more hazardous from a dose perspective by a factor of more than 10,000.
- 2. All food and water ingested by individual receptors was grown, produced, or gathered locally at the same location where the dose to a member of the public was highest. In the CAP88 planning runs, ingestion was the dominant pathway.





- During CAP88 planning runs, the bounding case assumed the wind conditions on the day in 2018 that would have resulted in the highest dose to the public.
 During depressurization operations, it will be verified that conditions do not challenge that bounding case.
- 4. During FTWCs depressurization, a molecular sieve bed will be used to capture tritiated water vapor released during the depressurization process before release to the atmosphere. Molecular sieve beds are not among the controls listed in NESHAPs regulations, so no credit for this capture was taken in the CAP88 runs, but in practice the sieve bed will prevent the release of the majority of tritiated water vapor to the atmosphere.

LANL's release limit under NESHAPs is 10 mrem per year. LANL has historically released less than 2mrem per year and so has budgeted 8 mrem of their limit to the FTWCs release. Under a worst-case scenario, with all the conservative assumptions above, where the entire contents of all four FTWCs were depressurized simultaneously and completely to the atmosphere, the modelled dose consequence would approach 20 mrem. Given that the selected alternative plans to release only the small amounts of tritium in the headspace of each FTWC and in an orderly process with only one FTWC being processed each day and with constant monitoring during the process, this is not a plausible outcome and the selected alternative does not pose a reasonable likelihood of challenging the 8 mrem emission budget LANL has assigned it.

There was an appropriate analysis of alternatives that considered the risks of a radioactive release to the public and the selected alternative relies on demonstrated technology that is compliant with radioactive air emissions regulations under conservative assumptions.

4.2 Worker Safety Considerations

For worker safety, the primary hazards of concern associated with the FTWC depressurization and handling activities are radiological consequences to the facility worker from a radiological release in the work zone, or physical consequences from an overpressure wave from an unplanned, unmitigated FTWC release.

Standoff distances are established and increase with time as the FTWCs pressure increases. The standoff distance protects workers from eardrum rupture and physical injury in the case of an unmitigated release. However, when handling pressurized FTWCs workers have increased risk of physical injury.

The conservatively calculated unmitigated dose consequences to co-located workers are classified as moderate for the release from multiple FTWCs and low for the release from a single FTWC.

4.3 Controlled Depressurization Process

An evaluation was performed by a tritium process and transportation SME to review the planned depressurization and pressure monitoring activities of the four FTWCs currently stored in Area G. The evaluation was performed by reviewing the written planned





activities, discussing the plan with key LANL personnel (several who have been involved in the project planning, analysis, and hands-on preparation for many years), and viewing a mockup of the storage container with an empty FTWC in an 85-gallon drum outer packaging at the TA-49 location at LANL. The conclusion of the SME evaluation is that the planned activities to depressurize and monitor the four FTWCs and transport them from Area G to WETF can be accomplished safely and without harm to the LANL workers, people living in nearby communities, or the environment.

Some notable details that were described and/or demonstrated that support the conclusion that the planned activities are safe and well-planned are as follows. The depressurization will only be performed in favorable weather conditions, e.g., at greater than 40°F, to ensure instrumentation operates properly and calm winds. The fixtures planned to be used with the FTWCs (i.e., the CVF and the PMM) have been designed, fabricated, and tested in accordance with accepted practices for handling tritium. Swagelok® VCR fittings with metal gaskets, stainless steel tubing, tritium-specific vacuum pumps and pressure gauges, a tritium vapor capture vessel (i.e., AL-M1 molecular sieve container), Swagelok valves with metal seals, and other components being used in the fixtures are appropriate for tritium handling. The plate assembly to be used to secure both fixtures to the FTWC is robust and assures that the fixtures are securely attached to the FTWC at all times, even if there is pressure in the FTWC.

The CVF fixture comprises an integral bell jar feature that allows the FTWC VCR fitting to be opened in a safe manner, not exposing the worker, public, or environment to a release of gases (e.g., helium-3, tritium, oxygen, protium, water vapor). Prior to opening the VCR fitting in the top of the FTWC lid, the CVF bell jar is helium leak tested to ensure it is leaktight before operations can commence. Once the FTWC VCR fitting is opened to the CVF volume, the pressure is evaluated to assure it is at, or below, the expected (conservatively calculated) pressure. The FTWC volume pressure is next slowly, and incrementally, reduced in 10 psi increments, bled through a tritium compatible metering valve to transfer internal gases (if any) to the vent cart. The incremental pressure reduction ensures there is not a large pressure differential created that could cause the paint cans to open suddenly. The vent cart comprises an AL-M1 vessel with molecular sieve designed to capture water vapor that may be in the effluent gas stream. The AL-M1s are a proven component that have been used in the WETF tritium facility for many years to safely purge the process gloveboxes of tritium. After the effluent gas leaves the vent cart, it will be monitored as it is transferred through the stack system for tritium and aliquot gas samples are captured for further gas analysis.

The PMM fixture is attached to the FTWC after the FTWC has been opened using the CVF to reduce the pressure to atmospheric conditions. The PMM is secured to the FTWC in a similar manner to the CVF using a mounting plate that secures it with U-bolts and nuts, sized appropriately. The PMM facilitates the FTWC being backfilled with helium to 30 psi that provides a method for assuring the FTWC can withstand unexpected pressure excursions during transport. The PMM is also used to pump down the FTWC with a scroll vacuum pump to ~240 torr (4.6 psia), or over an hour of pumping. The helium back-filling and evacuation ensure that there is no residual





oxygen and hydrogen present that could, theoretically, create a situation where the lower flammability limit is exceeded during transport.

The CVF depressurization and PMM pressure testing and monitoring steps will occur sequentially, one FTWC at a time, which further reduces the risk of release or unexpected occurrence from all four FTWCs at once. The movement of the FTWCs from the storage shed in Area G to the transfer frame and to the shipping trailer are well planned and rehearsed to anticipate any possible off-normal occurrence. The pressure will be monitored and recorded for each movement activity and loading step in the procedure. Finally, when the FTWCs are transported to the WETF, they will be moved one at a time to further reduce the likelihood of unforeseen problems.

During the evaluation, the SME inquired about off-normal events and possible problems that may occur, such as changes in weather conditions, or equipment failure. In those situations, operations will be paused and actions taken to ensure safe and stable conditions. The operational plan for depressurizing, monitoring, and transporting the FTWCs from Area G to WETF is technically accurate and complies with methods and processes appropriate for the safe handling of tritium and other gases within the FTWCs.

4.4 Onsite Transfer Operations

The onsite transfer operation consists of movement from Area G to WETF (approximately seven miles). The depressurized FTWCs containers will be transferred one at a time. The FTWC container in an open 85-gallon drum with the PMM installed is placed on a vibration isolating pallet. The drum is secured to the pallet and tied down in accordance with DOT Federal Motor Carrier Safety Requirements in the enclosed cargo compartment of the transfer vehicle. The vibration isolating pallet is used to reduce vibrations during transport. The planned onsite transfer operation includes road condition restrictions, restricted public access to the transfer route, and safety escort vehicle requirements.

This same process would be used if the FTWCs were transferred to a different LANL facility.

5. Conclusions

The alternatives for handling and disposing of the FTWCs containers fall into three broad categories with related sub options:

- Leave in place for approximately 125 years until the tritium decays to approximately 0.1% of its original activity.
- Transfer the FTWCs to another facility for depressurization of the FTWCs headspace and processing and shipment for disposal.
- Depressurize the FTWCs headspace at Area G, then transfer to another LANL facility for processing and shipment for disposal.





The Team's objectives in selecting an alternative are summarized as:

- Maximize the protection of the public and the environment.
- Prevent scenarios and conditions that could result in an uncontrolled, unmitigated, and unmonitored release of tritium.
- Ensure the safety of workers who are performing hands-on work.

5.1 Leave in Place Alternatives

The Leave in Place alternatives assume that the FTWCs containers will remain at Area G until the tritium decays and the amount of radioactive material is approximately 0.1% of the initial quantity.

These alternatives would require continued surveillance for approximately 125 years until the quantity of tritium is reduced to approximately 0.1% of its original activity from radioactive decay. During that time, the FTWCs pressure would continue to increase, and the safety exclusion area would expand. The likelihood of an uncontrolled, unmitigated, and unmonitored release would increase with time, increasing risk to the public, environment, and worker safety. An unplanned release while the FTWCs are in a containment container/structure would result in additional contaminated containers/structures.

The Team does not recommend Leave in Place alternatives.

5.2 Transfer from Area G to Another Facility for Depressurization

Transporting the FTWCs to an offsite facility in the current configuration inside an 85-gallon drum would not meet Department of Transportation and Nuclear Regulatory Commission requirements for offsite transportation in commerce. Offsite transportation would require a Type B package due to the quantity of tritium and the quantity of flammable gas would be restricted. For both offsite and onsite transportation, transporting the pressurized FTWCs would increase the risk of an unplanned, unmitigated, and unmonitored release of tritium and could jeopardize worker and public safety. There is no clear advantage to accepting this risk.

The Team does not recommend alternatives that include transportation of the FTWCs prior to depressurizing the headspace.

5.3 Depressurize the FTWCs at Area G and Transfer to Another LANL Facility

Depressurizing the FTWCs at Area G prior to transfer would substantially reduce the risk of an unplanned, unmitigated, and unmonitored release.

The Team evaluated the planned depressurization and pressure monitoring and transfer to another LANL facility and concluded it is technically sound and in accordance with accepted practice for safe handling of tritium. The Team concurs that performing the additional processing and preparation for disposal at WETF is appropriate.





6. Recommendation

The alternatives for Leave in Place and Transfer to another LANL facility prior to depressurizing the FTWCs headspace do not meet the criteria for maximizing the protection of the public and environment; preventing the unplanned, unmitigated, and unmeasured release of tritium; and ensuring worker safety.

The Team recommends depressurizing the FTWCs at Area G followed by onsite transfer to WETF for processing and preparation for disposal. The Team concludes that this alternative is technically sound, well-understood, and poses no undue risk to the public, worker, or the environment.





APPENDIX A: References

References include primary documents reviewed in the development of this report and does not include all documents reviewed.

- Memo from Permittees to NMED, subject: Withdrawal and Resubmittal of a Temporary Authorization Request for Waste Treatment, Storage, and Repackaging, Los Alamos National Laboratory Waste Facility Permit, EPA ID# NM0890010505, EPC-DO: 20-074/LA-UR:20-22103, dated March 9, 2020].
- Memorandum from James C. Kenney (NMED) to Theodore Wyka (Manager, NA-LA) and Steven Coleman (Associate Director, Triad), subject: *Temporary Authorization Hazardous Waste Facility Permit Los Alamos National Laboratory, EPA* ID#NM0890010515 HWB-LANL-19-033, dated June 9, 2025]
- 3. ACTVY-EM-25-141, Readiness Assessment Report for Area G Flanged Tritium Waste Container Venting and Handling, May 29, 2025
- 4. ABD-WFM-001, Rev 16.0, *Basis for Interim Operation for Technical Area 54, Area G*, January 2025
- 5. P&T-SA-002-R12 Addendum1-R1.4, *Transfer of FTWCs from Area G to WETF*, May 2024
- 6. LA-UR-20-27358, Using the CAP88 Plume Model & Dose Assessment Code for the FTWC Project, September 21, 2020
- 7. EPC-CP-QP-0148, R2, Emissions Management Plan for the FTWC Venting Project, February 26, 2024
- 8. LA-UR-19-30127, Evaluation of FTWC Vent System, July 28, 2020
- 9. LA-UR-18-26283, Application for Pre-Construction Approval under 40 CFR 61 Subpart A and H Venting of Flanged Tritium Waste Containers at TA-54, May 2019
- 10. DOE-HDBK-1129-2007, Tritium Handling and Safe Storage, March 2007
- 11.LA-UR-20-22148, Notification of Operational Scope Change for the FTWC Venting Project at Los Alamos National Laboratory (LANL), March 12, 2020









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ENCLOSURE 2

Longenecker & Associates Audit Report

Audit No. Triad WR12 T16 A

Date: August 22, 2025

ALDESHQ-25-041

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



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LONGENECKER & ASSOCIATES

Audit Report

Audited Organization(s)

Audit No. Triad WR12 T16 A

Performed 07/29/25 through 08/15/25

Revision 1

		Signed by:
Leader Auditor:	Peter H. Carson	Peter H. Carson 8/20/2025
-	Name	F13E8AA2538D4AA Signature & Däte

[Audit No. Triad WR12 T16 A – Rev1]

L&A Proprietary Information

Page 2 of 34

Contents

1.0	Executive Summary	3		
	Scope			
3.0	Audit Personnel	4		
	Personnel Contacted			
5.0	Audit Details	5		
6.0	Findings and Observations	6		
Atta	chment 1: Key Documents Reviewed	8		
Atta	chment 2: Audit Checklist	20		
Atta	Attachment 3: Audit Plan			

[Audit No. Triad WR12 T16 A – Rev1]

L&A Proprietary Information

Page 3 of 34

1.0 Executive Summary

The Area G Flanged Tritium Waste Containers (FTWCs) are stainless steel containers contained in 85-gallon USA 7A Type A stainless steel open-top drums. The FTWCs contain tritium contaminated waste materials generated at the Weapons Engineering Tritium Facility (WETF). The FTWCs are in storage at LANL's permitted waste management area, Technical Area 54, because they contain lead, a regulated constituent. The waste materials in each FTWC include AL-M1 containers with tritium on molecular sieve, molecular sieve in metal cans, and fired squib valves.

At WETF, tritium gas that becomes waste is processed by the Tritium Waste Treatment System (TWTS). Gaseous tritium waste is generated primarily after experiments and from leakage into gloveboxes. The product of the TWTS is dilute tritiated water (HTO and H₂O), which is stored on molecular sieve in containers called AL-M1s. Within the AL-M1s the tritium decays to helium, and the decay energy liberates hydrogen and oxygen gas from the water, by radiolysis.

Accumulated helium, hydrogen, and oxygen within different AL-M1s produces headspace pressure that is approximately proportional to the quantity of tritium. The waste stream identified in the Site Treatment Plan (STP) as part of LA-W934, High Activity Waste, consists of five containers. Four of these five containers (specifically the FTWCs) are owned by Triad and composed of molecular sieves and squib assemblies containing lead. These four (4) FTWCs were placed into above ground storage shed 1028 in TA-54 in 2007, where they remain today. These containers contain squib valves, that contain small amounts of lead, and were characterized as Resource Conservation and Recovery Act (RCRA) lead D008 mixed waste. While initially packaged in accordance with the Area G Waste Acceptance Criteria (WAC) as low-level waste, a routine internal compliance audit raised a question about the application of the mass-balance provisions. Conservatively, LANL recategorized these four containers as mixed waste and began managing them in accordance with RCRA requirements. Subsequent process improvements have incorporated the audit functions into the Waste Compliance and Tracking System process, effectively preventing recurrence. Due to tritium decay and radiolysis, these containers are believed to be pressurized, and pressure is assumed to be increasing over time. Weekly RCRA inspections include occupational monitoring for tritium from the FTWCs which has not been detected to date.

The valves containing the D008 lead were actuated prior to being declared waste; they serve no safety function and have no reactive material and pose no issue for offsite shipment and disposal.

The Longnecker and Associates independent audit team completed a comprehensive review of the FTWCs and their history including a review and regulatory analysis of the generation, characterization, storage, and management of the FTWCs and the associated communications and interactions with the NMED. The analysis included the regulatory context over the historical period from 2007 to present. The audit included a focused regulatory review of actions associated with the management of the FTWCs since generation.

The LANL hazardous waste program with respect to the FTWCS was deemed to be compliant with DOE and NMED requirements. It is fully implemented and effective. The audit revealed one finding and five observations, none of which materially impact the storage safety of the

[Audit No. Triad WR12 T16 A – Rev1]

L&A Proprietary Information

Page 4 of 34

FTWCs. There was one observation on the fire protection system in TA-54 Building 1028, which is inoperable, but sufficient compensatory measures are in place.

The review results indicate that the FTWCs have been managed in a safe and compliant manner consistent with New Mexico Hazardous Waste Act and its regulations codified at 20.4.1 of the New Mexico Administrative Code, since they were packaged. Furthermore, based on the compliance history and records of internal and external reviews, the review indicates that the overall LANL hazardous waste management program with respect to the FTWCs is robust and continues to protect the health and safety of the workers, public, and environment of Northern New Mexico.

2.0 Scope

Complete an independent compliance audit of the four flanged tritium waste containers (FTWCs) currently located at Los Alamos National Laboratory, Area G. The audit will comprise a comprehensive review of the FTWCs and their history.

Triad provided the existing FTWCs timeline and associated documentation including internal correspondence and correspondence with regulators. Triad facilitated interviews with staff as requested. Triad worked closely with the Longenecker team to ensure timely response to questions and requests for information.

3.0 Audit Personnel

Team Member	Roles
Pete Carson Audit Team Lead	Program Manager; SME LANL Waste; Reviewer; Author
Renee Echols	SME Waste Management; SME Regulatory Analysis; Reviewer; Author
John McCoy	SME Wase Management; SME Regulatory Analysis; Reviewer; Author
Brian McDaniel	SME on Squib Valves; Regulatory Analysis of Squib Valves; Reviewer; Author
Mark Senderling	SME Regulatory Analysis; Reviewer; Author
Ryan Hill	Technical Writer
Amanda Montoya	Administrative Support

4.0 Personnel Contacted

The following personnel were contacted during performance of the audit:

- Group Leader EPC-WMP, Triad
- Program Manager, EPC-WMP, Triad
- Team Leader EPC-CP, Triad

- Subcontract Technical Representative, Triad
- Deputy CH TRU Program Manager, N3B
- Operations Manager WFO-WETF, Triad
- Operations Center Manager, N3B
- Group Leader Waste Management Services, Triad

Personnel from DOE-NNSA, Triad, N3B, Longenecker & Associates, and Firewater were present during the entrance and exit meetings, which were conducted virtually/in person on July 29, 2025, and August 11, 2025, respectively.

5.0 Audit Details

The Longnecker and Associates independent audit team completed a comprehensive review of the FTWCs and their history including a review and regulatory analysis of the generation, characterization, storage, and management of the containers and the associated communications and interactions with the NMED consisting of over 300 documents and records.

The analysis included the regulatory context from 2007 to present including a focused regulatory review of actions associated with the management of the FTWCs since generation.

The specific lines of inquiry (LOIs) are presented in <u>Attachment 2: Audit Checklist</u>. The LOIs are grouped into the following subject areas:

- 1. Waste Identification and Classification
- 2. Waste Generation and Accumulation
- 3. Personnel Training
- 4. Emergency Preparedness and Prevention
- 5. Recordkeeping and Reporting
- 6. Transportation and Disposal
- 7. Other Items, which include:
 - a. Any recent changes in processes or procedures that could affect hazardous waste management.
 - b. Effectiveness of internal audit programs and corrective actions taken for identified deficiencies.
 - c. Communication channels and procedures for hazardous waste-related matters.

L&A Proprietary Information

Page 6 of 34

The audit was conducted by reviewing documentation provided by TRIAD and N3B (see Attachment 1: Key Documents Reviewed, interviews with Triad and N3B personnel (see Section 4 above for a list of organizations contacted), and a site visit to the storage facility in TA-54, Building 1028 on August 5, 2025. A kickoff meeting was held on July 29, 2025, and daily meetings were held with Triad personnel to discuss progress, documents needed, interviews requested, progress, and to address any questions. Triad also provided technical briefings on the following subjects:

- FWTC History
- FWTC RCRA Regulatory Background
- FWTC NESHAPS Background

An exit meeting was held on August 11, 2025.

6.0 Findings and Observations

The LANL hazardous waste program with respect to FTWCS was deemed to be compliant with DOE and NMED requirements. It is fully implemented and effective.

The audit revealed one finding and five observations, none of which materially impact the storage safety of the FTWCs. There was one observation on the fire protection system in TA-54 Building 1028, which is inoperable, but sufficient compensatory measures are in place, so this was not graded as a finding.

Findings		
Finding No	Subject Area	Description
01	Transportation	Manifest 116588-R-EPA-540- The transport company is not identified, and EPA number not noted in block 6. The transporter is properly identified on Form 540. This is a violation of 40 CFR 262 Appendix, which is a violation of 20.4.1.300 NMAC, incorporating 40 CFR 262.21.
Observations		
01	Waste Identification and Classification	WCATS printout, 35717R0 .waste_stream_profile, has an expiration date of 10/01/2111, obvious typographical error.
02	Waste Identification and Classification	WCATS printout, 8607R0.waste_stream_profile, had a comment made on 10/22/10 about D009 (Mercury), but there is no other information indicating mercury is present in this waste stream.
03	Waste Generation and Accumulation	TA-54 Shed 1028 has had a fire protection impairment since March 31, 2022. This cannot be repaired due to concerns with the FTWCs as documented in a standing order and safety evaluations. On August 5, 2025, the Assessment Team conducted a visual inspection of Shed 1028 and the FTWC's in storage during the weekly RCRA inspection. N3B has taken mitigative actions regarding the fire suppression system since the system is

		directly over the FTWCs and cannot currently be serviced. During daily rounds, the shed is visually inspected, the area is surveyed for combustibles, and fire extinguishers are verified as in service and accessible. This is documented at the TA-54 Operations Center and WEFT is notified each working day. Daily inspections are performed and logged.
04	Waste Generation and Accumulation	The NMED labeling requirements changed in 2019 to add Hazardous Waste labels noting the characteristics of the waste as required by 40 CFR 262.17(a)(5) but due to the restrictions on disturbing the FTWCs unnecessarily, the new labels were not applied. NMED is aware of this condition and so no further action will be taken until the containers have the pressure relieved and are repackaged.
05	Transportation	Manifest 116546 R-EPA-540, transporter dated the manifest as 5/22/22 versus 5/22/25.
Noteworthy Pr	ractices	
	Waste Generation and Accumulation	Over the last five years, Triad updated P409 LANL Waste Management and it's associated Waste Acceptance Criteria (WACs).
		This comprehensive series of new documents provides the requirements necessary for responsible waste management personnel at LANL including planning, generation, determination and characterization, packaging, accumulation and storage, transportation, treatment, and disposal. The lower tiered procedures for onsite, offsite, and wastewater waste acceptance criteria provides the generators, waste handlers, shippers and compliance staff detailed resources to ensure compliance from cradle to grave.
		Specifically, these documents control the Laboratory's system for safely and compliantly characterizing, packaging, storing, treating, disposing, and transporting the various sanitary, hazardous, radioactive, and otherwise regulated wastes generated by LANL activities.
	Waste Generation and Accumulation	LANL uses the Waste Characterization and Tracking System (WCATS) to maintain a single waste profile system and tracking system for the Laboratory permittees. There is a dedicated WCATS IT Team that maintains and upgrades the system based on new technologies such as hand-held devices and upgrades the system as part of their continuous improvement processes.
	Transportation	The site takes pictures of the container labels, seals, and shipment placarding before shipment. This provides assurance of compliance for the generator, transporter, and receiver throughout the transportation cycle.
	Record Keeping and Reporting	Triad has developed a procedure on official submittals and responses to and from the NMED. This procedure is a best management practice to consolidate the reporting requirements and provide step by step instructions to reduce the probability of non or late reporting.

Page 8 of 34

Attachment 1: Key Documents Reviewed

Documents Number and Title	Original Issue Date
On-Site Waste Acceptance Criteria	
P409 LANL Waste Management	4/17/2025
P409-1 LANL Waste Acceptance Criteria R2 AC3	1/8/2024
P409-2 Waste Acceptance Criteria for Onsite RCRA Facilities	4/16/2025
P409-3 Waste Acceptance Criteria for Onsite Wastewater Treatment Facilities	4/16/2025
P409-4 Acceptance Requirements for Offsite Waste Treatment, Storage, and Disposal Facilities	4/9/2025
WAC exemptions FTWCs, Email on WAC Exception for FTWC Storage	8/1/2025
WEF 20-005, Profile 48024, Waste Exceptions for FTWCs Loaded With AL-M1s at WETF	3/5/2020
Characterization	
21905R0.waste_profile_form-1	2009
21905R0.waste_stream_profile	2010
35717R0.waste_stream_profile	2025
56074R0.waste_profile_form	2025
56074R0.waste_stream_profile	2025
8607R0.waste_profile_form	1998
8607R0.waste_stream_profile	2016
AK-56074 D0	Undated
Area G FTWC Ci Calc Sheet Working	Undated
C09203611.container_profile-1	2025
C09203611.waste_data_profile-2	2025
C09203612.container_profile-1	2025
C09203612.waste_data_profile-1	2025
C09203613.container_profile-1	2025
C09203613.waste_data_profile-1	2025
C09203614.container_profile-3	2025
C09203614.waste_data_profile-1	2025
Composition Calcs - 56074	2019
lead content, actuactors254	2012
Molecular Sieve MSDS	2012
Transducer TCLP Results	2013
Valve assembly TCLP Results	2008
WEF 25-011 w-Attachment-approved 4-21-25-printed	2025
09292021 response to (NMED) on D001 and D003	9/29/2021
MLLW FTWCS D001 D003 FTWCs Hydrogen White Paper	12/5/2017

L&A Proprietary Information

Page 9 of 34

Pressurized Gas in Fired GTS Valves	1/9/2006
WETF-TM-335, 2007 Loading Procedure	2007
Q-7-19-0010U, Explosive Valve Assemblies to be Disposed at Nevada National Security Site	5/14/2019
Squib Information Email	8/5/2025
Compliance Information	
2014 NOV U1400793	1/31/2013
2013 NOV U1300864	3/20/2013
2013 SFO U1301547	5/2/2013
2013-05-13 SFO (Final) (HWB 13-03) (ID 251578)	5/13/2013
2014 NOV U1401430	5/9/2014
2014 NOV U1401447	5/12/2014
2015-07-14 Stipulated Final Order (HWB 15-21) (ID 58138)	7/14/2015
2016 NOV with proposed Penalties U1601352	6/1/2016
HWB 17-05, Stipulated Final Order (NOV June 2016)	1/12/2017
2017-01-18, Stipulated Final Order (HWB 17-05) (ID 251559)	1/18/2017
2017-11-07, SFO (Final version) (HWB 17-24) (ID 129542)	11/7/2017
2018-05-21 Stipulated Final Order (Signed) (HWB 18-10) (ID 216922)	5/16/2018
2019-04-03 Stipulated Final Order (Signed) (HWB 19-07) (ID 145635)	3/8/2019
HWB 19-06 SFO, Stipulated Final Order	3/8/2019
HWB 19-07 SFO,Stipulated Final Order (Notice of Violation, January 10, 2019)	3/8/2019
2019-04-02 Stipulated Final Order (Signed) (HWB 19-06) (ID 152996)	4/2/2019
2019 NOV U1900818	8/20/2019
HWB 19-57 SFO, Stipulated Final Order	12/23/2019
2019-12-24 Stipulated Final Order (Signed) (HWB 19-57) (ID 216691)	12/24/2019
NON-21, Notice of Violation and Resolution	7/19/2022
2023-05-31 SFO (Fully Executed) (HWB 23-01)	5/31/2023
2023-10-26, Resolution of Notice of Violation (N3B) (ID 264440)	10/26/2023
RPD HWB-LANL FY23 Notice of Violation and Penalties final	2/13/2024
Close out Inspection Related 2024-09-23 2390	9/23/2024
2024-10-07, Stipulated Final Order (HWB 14-18) (ID 277212)	10/7/2024
2025-04-21- HWB_LANL Final SFO for FY2022 Inspection	4/21/2025
SFO-2022, Resolution of Notice of Violation	5/30/2025
ERID-208370 - LANL HAZARDOUS WASTE FACILITY PERMIT INSTANCES OF NONCOMPLIANCE AND RELEASES FOR FISCAL YEAR 2011	11/30/2011
ERID-232286 - LANL HAZARDOUS WASTE FACILITY PERMIT INSTANCES OF NONCOMPLIANCE AND RELEASES FOR FISCAL YEAR 2012	11/29/2012
ERID-251534 - LANL HAZARDOUS WASTE FACILITY PERMIT INSTANCES OF NONCOMPLIANCE AND RELEASES FOR FISCAL YEAR 2013	11/27/2013
ERID-257845 - Addendum to the LANL Hazardous Waste Facility Permit Reporting on Instances of Noncompliance and Releases for Fiscal Years 2012 And 2013	7/1/2014

L&A Proprietary Information

Page 10 of 34

ERID-258666 - Notification of Anticipated Noncompliance with the LANL Hazardous Waste Facility Permit, EPA ID No. NM890010515	7/11/2014
ERID-262519 - Second Addendum, Reporting Additional Instances of Noncompliance with Hazardous Waste Facility Permit and Generator Requirements, LANL	10/21/2014
ERID-521616 - LOS ALAMOS NATIONAL LABORATORY HAZARDOUS WASTE FACILITY PERMIT INSTANCES OF NONCOMPLIANCE AND RELEASES FOR FISCAL YEAR 2012	11/29/2012
ESHID-600048 - Notification of Anticipated Noncompliance with the LANL Hazardous Waste Facility Permit, EPA ID No. NM890010515	11/26/2014
ESHID-600049 - LANL Hazardous Waste Facility Permit Instances of Noncompliance and Releases for Fiscal Year 2014	11/26/2014
ESHID-600898 - Self-Disclosure of Non-Compliances Resulting From the Extent of Condition Review, LANL Hazardous Waste Facility Permit No.~0890010515	8/31/2015
ESHID-601020 - APPROVAL EXTENSION REQUEST TO SUBMIT THE LANL HAZARDOUS WASTE FACILITY PERMIT INSTANCES OF NONCOMPLIANCE AND RELEASES FOR FY 2015 EPA ID #NM0890010515 HWB-LANL-MISC	11/30/2015
ESHID-601021 - Request for Extension to Submit the LANL Hazardous Waste Facility Permit Instances of Noncompliance and Releases for Fiscal Year 2015 EPA ID# NM0890010515	11/24/2015
ESHID-601071 - LANL Hazardous Waste Facility Permit Instances of Noncompliance and Releases for Fiscal Year 2015	12/21/2015
ESHID-601241 - Los Alamos National Laboratory Notification of Regulatory Noncompliance at T A-54, Area G, Pit 38	2/25/2016
ESHID-602018 - Los Alamos National Laboratory Hazardous Waste Facility Permit Instances of Noncompliance and Releases for Fiscal Year 2016 (NA-LA)	11/29/2016
ESHID-602701 - Notification of Anticipated Noncompliance with the LANL Hazardous Waste Facility Permit, EPA ID No. NM890010515	10/24/2017
ESHID-602740 - LANL Hazardous Waste Facility Permit Instances of Noncompliance and Releases for Fiscal Year 2017	11/28/2017
ESHID-602787 - Correction of Anticipated Noncompliance with the LANL Hazardous Waste Facility Permit, EPA ID No. NM890010515	12/19/2017
ESHID-602946 - Notification of Noncompliance with the LANL Hazardous Waste Facility Permit, EPA ID No. NM890010515	3/19/2018
ESHID-603033 - Delayed Notification of Waste Characterization Discrepancies and Addendum to the LANL Hazardous Waste Facility Permit Reporting Instances of Noncompliance and Releases/or Fiscal Year 2017	4/26/2018
ESHID-603309 - Transmittal of Fiscal Year 2018 Report of Releases and Instances of Noncompliance with the LANL Hazardous Waste Facility Permit	11/29/2018
ESHID-603310 - Notification of Anticipated Noncompliance with the LANL Hazardous Waste Facility Permit, EPA ID No. NM890010515	11/29/2018
ESHID-603367 - Clarification of Information Included with Anticipated Noncompliance Notification (EPC-DO: 18-433)	1/31/2019
ESHID-603539 - Transmittal of Fiscal Year 2019 Report of Releases and Instances of Noncompliance with the LANL Hazardous Waste Facility Permit EPA ID #NM0890010515	11/25/2019
ESHID-603608 - Fiscal Year 2020 Report of Releases and Instances of Noncompliance with the LANL Hazardous Waste Facility Permit, LANL, EPA ID #NM0890010515	11/30/2020

L&A Proprietary Information

Page 11 of 34

ESHID-603668 - Fiscal Year 2021 Reporting of Releases and Instances of Noncompliance with the LANL Hazardous Waste Facility Permit, LANL, EPA ID #NM0890010515	12/1/2021
ESHID-603730 - Fiscal Year 2021 Reporting of Releases and Instances of Noncompliance with the LANL Hazardous Waste Facility Permit, LANL, EPA ID #NM0890010515	12/1/2022
ESHID-603804 - Fiscal Year 2023 Reporting of Releases and Instances of Noncompliance with the LANL Hazardous Waste Facility Permit	11/30/2023
ESHID-603862-2 - Fiscal Year 2023 Reporting of Releases and Instances of Noncompliance with the LANL Hazardous Waste Facility Permit	11/26/2024
FTWC Storage	
1-6-2020 1-12-2020 FTWC Inspection	1/7/2020
1-13-2020 - 1-19-2020 FTWC Inspection	1/15/2020
1-20-2020 - 1-26-2020 FTWC Inspection	1/22/2020
1-27-2020 - 2-2-2020 FTWC Inspection	1/29/2020
2-10-2020 2-16-2020 FTWC Inspection	2/10/2020
2-17-20 2-23-2020 FTWC Inspection	2/19/2020
2-24-2020 3-1-2020 FTWC Inspection	2/24/2020
1-3-2022 - 1-9-2022 FTWC Inspection	1/4/2022
1-10-22 - 1-16-22 FTWC Inspection	1/11/2022
1-17-2022 - 1-23-2022 FTWC Inspection	1/18/2022
1-24-2022 - 1-30-2022 FTWC Inspection	1/25/2022
1-31-2022 - 2-6-2022 FTWC Inspection	2/1/2022
2-7-2022 - 2-13-2022 FTWC Inspection	2/8/2022
2-14-2022 - 2-20-2022 FTWC Inspection	2/15/2022
2-21-2022 - 2-27-2022 FTWC Inspection	2/22/2022
2-28-2022 - 3-6-2022 FTWC Inspection	3/1/2022
3-7-2022 - 3-13-2022 FTWC Inspection	3/8/2022
3-14-2022 - 3-20-2022 FTWC Inspection	3/15/2022
3-21-2022 - 3-27-2022 FTWC Inspection	3/22/2022
3-28-2022 - 4-3-2022 FTWC Inspection	3/29/2022
4-4-2022 - 4-10-2022 FTWC Inspection	4/5/2022
4-11-2022 - 4-17-2022 FTWC Inspection	4/13/2022
4-18-2022 - 4-24-2022 FTWC Inspection	4/19/2022
4-25-2022 - 5-1-2022 FTWC Inspection	4/26/2022
5-2-2022 - 5-8-2022 FTWC Inspection	5/3/2022
5-9-2022 - 5-15-2022 FTWC Inspection	5/9/2022
5-16-2022 - 5-22-2022 FTWC Inspection	5/16/2022
5-23-2022 - 5-29-2022 FTWC Inspection	5/24/2022
5-30-2022 - 6-5-2022 FTWC Inspection	5/31/2022

L&A Proprietary Information

Page 12 of 34

6-6-2022 - 6-12-2022 FTWC Inspection	6/7/2022
6-13-2022 - 6-19-2022 FTWC Inspection	6/14/2022
6-20-2022 - 6-26-2022 FTWC Inspection	6/21/2022
6-27-2022 - 7-3-2022 FTWC Inspection	6/28/2022
7-4-2022 - 7-10-2022 FTWC Inspection	7/5/2022
7-11-2022 - 7-17-2022 FTWC Inspection	7/12/2022
7-18-2022 - 7-24-2022 FTWC Inspection	7/19/2022
7-25-2022 - 7-31-2022 FTWC Inspection	7/26/2022
8-1-2022 - 8-7-2022 FTWC Inspection	8/2/2022
8-8-2022 - 8-14-2022 FTWC Inspection	8/9/2022
8-15-2022 - 8-21-2022 FTWC Inspection	8/16/2022
8-22-2022 - 8-28-2022 FTWC Inspection	8/23/2022
8-29-2022 - 9-4-2022 FTWC Inspection	8/30/2022
9-5-2022 - 9-11-2022 FTWC Inspection	9/6/2022
9-12-2022 - 9-18-2022 FTWC Inspection	9/13/2022
9-19-2022 - 9-25-2022 FTWC Inspection	9/20/2022
9-26-2022 - 10-2-2022 FTWC Inspection	9/27/2022
10-3-2022 - 10-9-2022 FTWC Inspection	10/4/2022
10-10-2022 - 10-16-2022 FTWC Inspection	10/11/2022
10-17-2022 - 10-23-2022 FTWC Inspection	10/18/2022
10-24-2022 - 10-30-2022 FTWC Inspection	10/25/2022
10-31-2022 - 11-6-2022 FTWC Inspection	11/1/2022
11-7-2022 - 11-13-2022 FTWC Inspection	11/8/2022
11-14-2022 - 11-20-2022 FTWC Inspection	11/15/2022
11-21-2022 - 11-27-2022 FTWC Inspection	11/22/2022
11-28-2022 - 12-4-2022 FTWC Inspection	11/29/2022
12-5-2022 - 12-11-2022 FTWC Inspection	12/6/2022
12-12-2022 - 12-18-2022 FTWC Inspection	12/13/2022
12-19-2022 - 12-25-2022 FTWC Inspection	12/20/2022
12-26-2022 - 1-1-2022 FTWC Inspection	12/27/2022
01-02-23 - 01-08-23 FTWC Inspection	1/2/2023
01-08-24 - 1-14-24 FTWC Inspection	1/9/2023
01-09-23 - 01-15-23 FTWC Inspection	1/10/2023
01-16-23 - 01-22-23 FTWC Inspection	1/18/2023
01-23-23 - 01-29-23 FTWC Inspection	1/24/2023
02-06-23 - 02-12-23 FTWC Inspection	2/7/2023
02-13-23 - 02-19-23 FTWC Inspection	2/16/2023
02-20-23 - 02-26-23 FTWC Inspection	2/21/2023
02-27-23 - 03-05-23 FTWC Inspection	2/28/2023

L&A Proprietary Information

Page 13 of 34

03-06-23 - 03-12-23 FTWC Inspection	3/4/2023
03-13-23 - 03-19-23 FTWC Inspection	3/15/2023
03-20-23 - 03-26-23 FTWC Inspection	3/21/2023
03-27-23 - 04-02-23 FTWC Inspection	3/28/2023
04-03-23 - 04-09-23 FTWC Inspection	4/4/2023
04-10-23 - 04-16-23 FTWC Inspection	4/11/2023
04-10-23 - 04-10-23 FT WC Inspection 04-17-23 - 04-23-23 FTWC Inspection	4/11/2023
04-24-23 - 04-30-23 FTWC Inspection	4/26/2023
05-01-23 - 05-07-23 FTWC Inspection	5/2/2023
05-08-23 - 05-14-23 FTWC Inspection	5/9/2023
05-15-23 - 05-21-23 FTWC Inspection	5/16/2023
05-22-23 - 05-28-23 FTWC Inspection	5/24/2023
05-29-23 - 06-04-23 FTWC Inspection	5/30/2023
06-05-23 - 06-11-23 FTWC Inspection	6/6/2023
06-12-23 - 06-18-23 FTWC Inspection	6/13/2023
06-19-23 - 06-25-23 FTWC Inspection	6/20/2023
06-26-23 - 07-02-23 FTWC Inspection	6/27/2023
7-3-2023 - 7-9-2023 FTWC Inspection	7/3/2023
7-10-2023 - 7-16-2023 FTWC Inspection	7/11/2023
7-17-2023 - 7-23-2023 FTWC Inspections	7/18/2023
7-24-2023 - 7-30-2023 FTWC Inspection	7/25/2023
7-31-2023 - 8-6-2023 FTWC Inspection	8/1/2023
8-7-2023 - 8-13-2023 FTWC Inspection	8/9/2023
8-14-2023 - 8-20-2023 FTWC Inspection	8/16/2023
8-21-2023 - 8-27-2023 FTWC Inspection	8/22/2023
8-28-2023 - 9-3-2023 FTWC Inspection	8/29/2023
9-4-2023 - 9-10-2023 FTWC Inspection	9/5/2023
9-11-2023 - 9-17-2023 FTWC Inspection	9/12/2023
9-18-2023 - 9-24-2023 FTWC Inspection	9/19/2023
9-25-2023 - 10-1-2023 FTWC Inspection	9/26/2023
10-2-2023 - 10-8-2023 FTWC Inspection	10/3/2023
10-9-2023 - 10-15-2023 FTWC Inspection	10/10/2023
10-16-2023 - 10-22-2023 FTWC Inspection	10/17/2023
10-23-2023 - 10-29-2023 FTWC Inspection	10/24/2023
10-30-2023 - 11-5-2023 FTWC Inspection	10/31/2023
11-6-2023 - 11-12-2023 FTWC Inspection	11/7/2023
11-13-2023 - 11-19-2023 FTWC Inspection	11/14/2023
11-20-2023 - 11-26-2023 FTWC Inspection	11/21/2023
11-27-2023 - 12-3-2023 FTWC Inspection	

L&A Proprietary Information

Page 14 of 34

12-4-2023 - 12-10-2023 FTWC Inspection	12/5/2023
12-11-2023 - 12-17-2023 FTWC Inspection	12/12/2023
12-18-2023 - 12-24-2023 FTWC Inspection	12/19/2023
12-25-2023 - 12-31-2023 FTWC Inspection	12/26/2023
01-01-24 - 01-07-24 FTWC Inspection	1/2/2024
01-15-24 - 01-21-24 FTWC Inspection	1/16/2024
01-22-24 - 01-28-24 FTWC Inspection	1/24/2024
01-29-24 - 02-04-24 FTWC Inspection	1/30/2024
02-05-24 - 02-11-24 FTWC Inspection	2/6/2024
02-12-24 - 02-02-18-24 FTWC Inspection	2/20/2024
02-19-24- 02-25-24 FTWC Inspection	2/28/2024
03-04-24 - 03-10-24 FTWC Inspection	3/5/2024
03-11-24 - 03-17-24 FTWC Inspection	3/12/2024
03-18-24 - 03-24-24 FTWC Inspection	3/19/2024
03-25-24 - 03-31-24 FTWC Inspection	3/26/2024
04-01-24 - 04-07-24 FTWC Inspection	4/2/2024
04-08-24 - 04-14-24 FTWC Inspection	4/9/2024
04-15-24 - 04-21-24 FTWC Inspection	4/16/2024
04-22-24 - 04-28-24 FTWC Inspection	4/23/2024
04-29-24 - 05-05-24 FTWC Inspection	4/30/2024
05-06-24 - 05-12-24 FTWC Inspection	5/7/2024
05-13-24 - 05-19-24 FTWC Inspection	5/14/2024
05-20-24 - 05-26-24 FTWC Inspection	5/22/2024
05-27-24 - 06-02-24 FTWC Inspection	5/28/2024
06-03-24 - 06-09-24 FTWC Inspection	6/4/2024
06-10-24 - 06-16-24 FTWC Inspection	6/11/2024
06-17-24 - 06-23-24 FTWC Inspection	6/18/2024
06-24-24 - 06-30-24 FTWC Inspection	6/25/2024
07-01-24 - 07-07-24 FTWC Inspection	7/2/2024
07-08-24 - 07-14-24 FTWC Inspection	7/9/2024
07-15-24 - 07-21-24 FTWC Inspection	7/16/2024
07-29-24 - 08-04-24 FTWC Inspection	7/30/2024
8-5-2024 8-11-2024 FTWC Inspection	8/6/2024
8-12-2024 8-18-2024 FTWC Inspection	8/13/2024
8-19-2024 8-25-2024 FTWC Inspection	8/22/2024
8-26-2024 9-1-2024 FTWC Inspection	8/27/2024
9-2-2024 9-8-2024 FTWC Inspection	9/4/2024
9-9-2024 9-15-2024 FTWC Inspection	9/12/2024
9-23-2024 9-29-2024 FTWC Inspection	9/24/2024

L&A Proprietary Information

Page 15 of 34

9-30-2024 - 10-6-2024 FTWC Inspection	10/1/2024
10-7-2024 - 10-13-2024 FTWC Inspection	10/8/2024
10-14-2024 - 10-20-2024 FTWC Inspection	10/15/2024
10-21-2024 - 10-27-2024 FTWC Inspection	10/22/2024
10-28-2024 - 11-03-2024 FTWC Inspection	10/29/2024
11-04-2024 - 11-10-2024 FTWC Inspection	11/5/2024
11-11-2024 - 11-17-2024 FTWC Inspection	11/12/2024
11-18-2024 - 11-24-2024 FTWC Inspection	11/19/2024
11-25-2024 - 12-01-2024 FTWC Inspection	11/26/2024
12-02-2024 - 12-08-2024 FTWC Inspection	12/3/2024
12-09-2024 - 12-15-2024 FTWC Inspection	12/12/2024
12-16-2024 - 12-22-2024 FTWC Inspection	12/17/2024
12-23-2024 -12-29-2024 FTWC Inspection	12/23/2024
12-30-2024 - 01-05-2025 FTWC Inspection	12/31/2024
1-06-2025 - 1-12-2025 FTWC Inspection	1/7/2025
1-13-2025 - 1-19-2025 FTWC Inspection	1/14/2025
1-20-2025 - 1-26-2025 FTWC Inspection	1/22/2025
01-27-2025 - 02-02-2025 FTWC Inspection	1/28/2025
02-03-2025 - 2-09-25 FTWC Inspection	2/4/2025
02-10-2025 - 02-16-2025 FTWC Inspection	2/12/2025
02-17-2025 - 02-23-2025 FTWC Inspection	2/18/2025
02-24-2025 - 03-02-2025 FTWC Inspection	2/25/2025
3-3-2025 - 3-9-2025 FTWC Inspection	3/4/2025
3-10-2025 - 3-16-2025 FTWC Inspection	3/12/2025
3-17-2025 - 3-23-2025 FTWC Inspection	3/19/2025
3-24-2025 - 3-30-2025 FTWC Inspection	3/25/2025
3-31-2025 - 4-6-2025 FTWC Inspection	4/1/2025
4-7-2025 - 4-13-2025 FTWC Inspection	4/8/2025
4-7-2025 - 4-13-2025 FTWC Inspection	4/8/2025
4-14-2025 - 4-20-2025 FTWC Inspection	4/15/2025
4-21-2025 - 4-27-2025 FTWC Inspection	4/22/2025
05-05-2025- 05-11-2025 FTWC Inspection	5/6/2025
05-12-2025 - 05-18-2025 FTWC Inspection	5/13/2025
05-19-2025 - 05-25-2025 FTWC Inspection	5/20/2025
05-26-2025 - 06-1-2025 FTWC Inspection	5/27/2025
06-02-2025 - 06-08-2025 FTWC Inspection	6/3/2025
06-09-2025 - 06-15-2025 FTWC Inspection	6/10/2025
06-16-2025 - 06-22-2025 FTWC Inspection	6/17/2025
06-23-2025 - 06-29-2025 FTWC Inspection	6/24/2025

L&A Proprietary Information

Page 16 of 34

6-23-2025 - 6-29-2025 FTWC Inspection	6/24/2025
06-30-2025 - 07-6-2025 FTWC Inspection	7/2/2025
2016-11 Extension alternative inspections Area G ESHID-601954	11/8/2016
2017-04 Baseline Report alternative inspections Area G ESHID-602287	4/6/2017
2018-03 Final Quarterly Report Alternative Inspection ESHID-602939	3/8/2018
IMG_0727, Photo of Label on Container C09203613	Undated
IMG_0729, Photo of Label on Container C09203612	Undated
IMG_0730, Photo of Label on Container C09203614	Undated
IMG_0731, Photo of Label on Container C09203611	Undated
Current Hazardous Waste Label	8/8/2025
N3B-SO-TRU-4022-R3-Area-G-MLLW-FTWC-Venting-and-Handling-Emergency-Response-R2A2s-FINAL	3/6/2025
N3B-SO-TRU-4023-R4-Area-G-MLLW-FTWC-Venting-and-Handling-Operations-Support-Org-R2A2s-FINAL	4/21/2025
N3B-SO-TRU-4026-R1-Area-G-MLLW-FTWC-Venting-and-Handling_Fire-Protection-FINAL	4/4/2025
N3B-SO-TRU-4055, FTWC Access and Work Evaluation Requirements	11/3/2023
Training	
N3B printout of training	7/30/2025
Permit and Related Documents	
2003-06 TA-54 Part B Application LA-UR-03-3579	6/1/2003
2003-08 General Part B Application LA-UR-03-5923	8/1/2003
March 2010 Permit Full	3/17/2006
1994-03 Final FFCO 1684	3/22/1994
2010-11 RCRA Permit 34162	11/30/2010
LANL_Permit_Attachment_D_January_2024, Contingency Plan	1/1/2024
IMG_0522, Photo of contingency Plan Location	Undated
Pad 5 Map and Contingency Plan Location	Undated
2021 Biannual Report For LANL	2/28/2022
EPC-DO-24-024 Transmittal CY 2023 Hazardous Waste Biennial Report FINAL	2/26/2024
3-29-23_EMID-702648_N3B-2023-0093_FY22_STP_Annual_Update_Prop_Rev33_032923-1	3/29/2023
Approval STP Annual Update and Revision 34.0 _6-17-2024-1.pdf cmt	6/17/2024
STP Annual Update and Revision 34.0 Submittal and Approval	6/17/2024
2009-03 FY 2008 STP 31439	3/30/2009
2009-04 Email discussion of resubmittal FY 2008 STP 31509	4/22/2009
2009-05 Resubmittal of FY 2008 STP with MA0W934 add 31553	5/20/2009
2009-09 NOD FY 2008 STP Rev 19 32013	9/16/2009
2009-10 Response to NOD FY 2008 32094	10/9/2009
2009-10 Response to NOD STP FY 2008 Rev 19 32094	10/9/2009
2010-02 NMED Annual Update for FY 2008 approval 33215	9/30/2009

L&A Proprietary Information

Page 17 of 34

2010-02 Published FY 2008 STP Rev 19 33025	2/5/2010
2010-03 Extension Request for STP FY 2009 Rev 20 33328	3/18/2010
2010-03 STP Update FY 2009 Rev 20 33356	3/31/2010
2010-04 Summary of Correspondence for LA-W934 33431	4/8/2010
2010-06 NOD STP 2009 Update Rev 20 33642	6/3/2010
2010-07 Response to NOD of the STP SY 2009 Rev 20 33765	6/30/2010
2010-11 NMED Rec 20 STP FY 2009 34103	11/8/2010
2011-03 STP FY 2010 Update and Proposed Rev 21 34440	3/31/2011
2011-06 Resubmittal of STP FY 2010 Update and Proposed Rev 21 34586	6/10/2011
2011-09 NOD DTP FY 2010 Update Rev 21 34766	10/21/2011
2011-10 Response to NOD STP FY 2010 Rev 21 34849	10/7/2011
2012-03 NMED Rev 21 Annual Update STP 35143	3/21/2012
2012-03 STP FY 2011 Update and Proposed Rev 22 35146	3/30/2012
2012-09 Disapproval of STP FY 2011 and Rev 22 35487	9/18/2012
2012-10 Response NOD STP FY 2011 Rev 22 35538	10/17/2012
2012-12 NMED Rev 22 Annual STP 35639	12/10/2012
2013-03 STP FY 2012 and Proposed Rev 23 35786	3/27/2013
2012 -12 NMED STP Rev 36122	9/4/2013
2013-12 Disapproval STP FY 2012 and Rev 23 36122	12/9/2013
2013-12 Request to Extend Compliance Date LA-W934 36098	12/20/2013
2014-01 Approval Extension STP FY 2011 36141	1/6/2014
2014-02 Response to NOD STP FY 2012 Rev 23 36242	2/10/2014
2014-06 STP SY 2013 and Proposed Rev 24 36337	6/9/2014
2015-03 STP FY 2014 and Proposed Rev 25 36976	3/31/2015
2015-08 Disapproval STP FY 2024 Rev 25 37251	8/26/2015
2015-09 Response NOD STP FY 2014 Rev 25 37293	9/24/2015
2016-03 STP FY 2015 and Proposed Rev 26 37516	3/31/2016
2016-05 disapproval STP FY 2015 Rev 26 37615	5/18/2016
2016-09 Response to NOD STP SY 2015 Rev 26 37696	9/29/2016
2017-01 NMED STP Rev 26 37869	1/30/2017
2017-03 Approval extension alternative inspections Area G ESHID-602231	3/8/2017
2017-03 Request for extension alternative inspections Area G ESHID-602223	3/8/2017
2017-03 STP FY 2016 and Proposed Rev 27 37960	3/30/2017
2017-04 Baseline Report alternative inspections Area G ESHID-602287	4/6/2017
2017-07 July 2017 Quarterly ReportAlternative Inspections ESHID-602497	7/6/2017
2017-09 NMED STP Approved Rev 27 38231	9/15/2017
2017-10 Quarterly ReportAlternative Inspections ESHID-602691	10/19/2017
2018-01 Quarterly ReportAlternative Inspections ESHID-602810	1/5/2018
2018-05 STP FY 2017 and Proposed Rev 28 38447 (2)	5/31/2018

L&A Proprietary Information

Page 18 of 34

2018-05 STP FY 2017 and Proposed Rev 28 38447	5/31/2018
2018-06 Approval Extension Compliance Date 38518	7/9/2018
2018-06 Extension of Compliance Date STP FY 2017 Rev 28 38511	6/28/2018
2018-08 Approval Request for Resubmittal FY 2017 STO Rev 28 38581	8/27/2018
2018-08 resubmittal request FY 2017 STP Rev 28 38576	8/23/2018
2018-10 Resubmittal STP FY 2017 and Proposed Rev 28 38613	10/30/2018
2018-12 Disapproval Resubmittal STP 2017 Annual Update Rev 28 38722	12/6/2018
2019-01 Response Disapproval STP FY 2017 Rev 28 38753	1/10/2019
2019-03 Resubmittal STO FY 2017 Rev 28 38826	3/7/2019
2019-04 Disapproval Resubmittal STP FY 2017 Annual Update Rev 28 38864	4/9/2019
2019-05 Response Disapproval SSTP FY 2017 rev 28 38906	5/9/2019
2019-06 Request for Temporary Authorization ESHID-603429	6/18/2019
2019-07 Fee Assessment Temporary Authorization ESHID-603455	7/11/2019
2019-08 NMED Approval STP FY 2017 Rev 28 39071	8/20/2019
2020-04 NMED Approval STP FY 2018 Rev 29 39350	4/9/2020
2020-06 Demand for Penalty FFCO LANL 39392	6/5/2020
2020-06 Submittal STP FY 2019 and Proposed 30 39412	6/22/2020
2020-09 Approval STP FY 2019 Annual Update and Rev 30 39495	9/22/2020
2021-03 STP FY 2020 and Proposed Rev 31 39647	3/29/2021
2021-07 Approval of STP FY 2020 Rev 31 39718	7/12/2021
2022-03 STP FY 2021 update and Proposed Rev 32 39942	3/24/2022
2022-08 Approval with Mods STP FY 2021 Rev 32 EMID-702245	8/4/2022
2023-03 STP FY 2022 Update and Proposed Rev 33 40347	3/29/2023
2023-06 Public Outreach FTWCs ESHID-603806	6/6/2023
2023-08 Approval STP FY 2022 Annual Update Rev 33 40485	8/9/2023
2024-03 STP FY 2023 Annual and Proposed Rev 34 40704	3/19/2024
2024-06 Approval STP FY 2023 Rev 34 40915	6/17/2024
2025-03 EMID-703770, N3B-2025-0002, FY24 STP Annual Update Prop Rev35 033135	3/31/2025
Transportation	
115995 R-EPA-540, Hazardous Waste Manifest	2/19/2025
116109 R-EPA-540, Hazardous Waste Manifest	3/24/2025
116141 R-EPA-540, Hazardous Waste Manifest	3/13/2025
116144 R-EPA-540, Hazardous Waste Manifest	3/13/2025
116286 R-EPA-540, Hazardous Waste Manifest	5/8/2025
116400 R-EPA-540, Hazardous Waste Manifest	4/29/2025
116500 R-EPA-540, Hazardous Waste Manifest	5/12/2025
116540 R-EPA-540, Hazardous Waste Manifest	5/22/2025
116546 R-EPA-540, Hazardous Waste Manifest	5/22/2025
116588-R-EPA-540, Hazardous Waste Manifest	6/12/2025

L&A Proprietary Information

Page 19 of 34

116663 R EPA-540_541, Hazardous Waste Manifest	6/23/2025
FSD-P409-0300 Waste Characterization and Compatibility Procedure	5/19/2021
MLLW FTWC NRC and DOT Evaluation 09.14.21	9/14/2021
TP-P409-0700 Onsite Waste Management Field Tasks Procedure	9/9/2024
TP-P409-0701 Preparing and Shipping Waste Material Offsite Procedure	2/25/2025



Attachment 2: Audit Checklist

Section	Verification Method/LOI	Assessment/Summary	Result
1.0 Waste Ide	1.0 Waste Identification and Classification		
1.1	Review documentation provided by Triad. Assess how the FTWCs were	<u>Documents Reviewed:</u> Documentation as noted in Attachment 1, Characterization.	Hazardous waste determination is correct
	they were assigned to waste streams.	Personnel Contacted: Document review only.	reviewed, and the waste is assigned a D008 code.
		Findings and Observations: None	
		 Comments: D008 determination made by TCLP for the fired squib switches. LANL provided justification for why D001 or D003 do not apply due to hydrogen being above the LFL or the container pressurization, this position was also provided to NMED 9/29/21. 	
1.2	Review documentation provided by Triad. Assess how the FTWC waste	Documents Reviewed: Documentation as noted in Attachment 1, Characterization.	The final waste stream was properly assigned the D008
	stream is classified and assigned EPA hazardous waste numbers.	Personnel Contacted: Document review only.	code.
		Findings and Observations: No findings.	
		Observation 01- WCATS Printout 35717R0.waste_stream_profile has an expiration date of 10/01/2111, obvious typographical error.	
		Observation 02- WCATS Printout 8607R0.waste_stream_profile had a comment made on 10/22/10 about D009 (Mercury), but there is no other information indicating mercury is present in this waste stream.	
		Comments:	

L&A Proprietary Information

Page 21 of 34

Section	Verification Method/LOI	Assessment/Summary	Result
		 D008 determination made by TCLP for the fired squib switches. Documentation provided included proof that the squibs were fired and do not contain other hazardous materials. Waste streams were assigned to the fired squib switches and the FTWCs separately. When the waste streams were combined a new waste stream was created and since this is not treatment for D008, the code carried to the final waste stream. 	
1.3	Review documentation provided by Triad. Assess how the records of waste analysis, process knowledge/ Acceptable Knowledge and related information are maintained and	Documents Reviewed: Documentation as noted in Attachment 1, Characterization. Personnel Contacted: Document review only.	Document control processes appear adequate.
	updated as needed.	Findings and Observations: None	
		 Comments: Pertinent documents are assigned document numbers and are in the LANL document control system. Characterization data is also in WCATS and printouts indicate running comment and editorial record. 	
2.0 Waste Gener	2.0 Waste Generation and Accumulation		
2.1	Review hazardous waste permit. Verify that LANL is a Large Quantity Site and has an EPA ID#.	Documents Reviewed: RCRA permit, see Attachment 1, Permit and Related Documents. Personnel Contacted: Document review only.	LANL is a Large Quantity Site and has an EPA ID#, NM0890010515
		Findings and Observations: None Comments:	
		None	

L&A Proprietary Information

Page 22 of 34

Section	Verification Method/LOI	Assessment/Summary	Result
2.2	Review documentation provided by Triad, including historic documentation of self-assessment, external assessments, and NOVs.	<u>Documents Reviewed:</u> Self-assessments, external assessments, notices of violation (NOVs), and facility inspections as shown in Attachment 1, Compliance Information and FTWC Storage.	The LANL hazardous waste management program is routinely assessed, and appropriate corrective actions are taken.
	Conduct a visit to the storage area. Assess how the FTWC hazardous	Personnel Contacted: None for document review.	
	waste contamers are stored and managed. This includes compatibility closure labeling aisle	August 5, 2025 for on-site visit.	
	spacing, condition, and inspections.	Findings and Observations: No findings	
		 Observations- Observation 03- TA-54 Shed 1028 has had a fire protection impairment since March 31, 2022. This cannot be repaired due to concerns with the FTWCs as documented in a standing order and safety evaluations. On August 5, 2025, the Assessment Team conducted a visual inspection of Shed 1028 and the FTWC's in storage during the weekly RCRA inspection. N3B has taken mitigative actions regarding the fire suppression system since the system is directly over the FTWCs and cannot currently be serviced. During daily rounds, the shed is visually inspected, the area is surveyed for combustibles, and the fire extinguisher is verified as in service and accessible. This is documented at the TA-54 Operations Center and WETF is notified each working day. Daily inspections are performed and logged. Observation 04- The NMED labeling requirements changed in 2019 to add Hazardous Waste labels noting the characteristics of the waste as required by 40 CFR 262.17(a)(5) but due to the restrictions on disturbing the FTWCs unnecessarily, the new labels were not applied. NMED is aware of this condition and so no further action will be taken until the containers have the pressure relieved and are repackaged. Alternative RCRA inspections were in place between 2016 and 2022. Post additional, safety analysis standard RCRA inspection resumed. 	

L&A Proprietary Information

Page 23 of 34

Section	Verification Method/LOI	Assessment/Summary	Result
		 Comments: Documents were reviewed spanning the period from 2007 to the present. Significant changes were made to the program after the 2014 WIPP incident and the number of self-identified and externally identified issues has fallen significantly since 2017 versus earlier periods. Multiple internal and external assessments have been conducted since 2014 to the present and corrective actions implemented. Trends and common factors were evaluated and findings and corrective actions from previous reports were reevaluated. During the COVID pandemic building inspections were truncated but emergency systems and monitoring continued to function. No upset conditions or facility issues were overlooked. 	
3.0 Personnel Training	aining		
3.2	Triad and N3B. Assess training for personnel who handle and manage hazardous waste to ensure they receive initial and annual refresher training. Review documentation provided by Triad and N3B. Assess maintenance and availability of training records.	Example training record as shown in Attachment 1, Training. Personnel Contacted: Document review only. Findings and Observations: None Comments: Training appears appropriate for the position and nothing is past due. Bocuments Reviewed: Example training record as shown in Attachment 1, Training. Personnel Contacted: Document review only.	appropriate for position. N3B Training record is from an electronic system and easily accessible.
		Findings and Observations: None	

L&A Proprietary Information

Page 24 of 34

Section	Verification Method/LOI	Assessment/Summary	Result
		Comments: N3B electronic system, DevonWay© allows access to training records and details by employees and supervisory personnel. Triad uses a similar system, UTrain, which allows similar access.	
4.0 Emergency I	4.0 Emergency Preparation and Prevention		
4.1	Review the contingency plan provided by Triad. Verify plan is current and reflects permit requirements.	Documents Reviewed: Contingency plan, see Attachment 1, Permit and Related Documents. Also available on NMED website. Personnel Contacted: Document review only. Findings and Observations: None Comments: None	The compliance plan is current, January 2024, and included in the permit.
4.2	Conduct a visit to the storage area. Assess the condition of emergency equipment including alarms, communication devices, fire extinguishers, eyewash stations, PPE, and spill control equipment.	Documents Reviewed: Weekly RCRA inspections, Operation Center daily logbook, WCATS waste profiles, laboratory results, TA-54 training records as shown in Attachment 1, Characterization, FTWC Storage, Personnel Contacted: Program Director, EPC-WMP, Triad Team Leader ECP-CP, Triad Deputy CH TRU Program Manager, N3B Operations Center Manager, N3B	FTWCs are compliantly stored per RCRA in the 1028 Storage Shed at TA-54

L&A Proprietary Information

n Page 25 of 34

Section	Verification Method/LOI	Assessment/Summary	Result
		Findings and Observations: Discussed the fire suppression being out of service and mitigative actions including daily inspections on the trailer, area combustibles, and fire safety equipment. Comments: Mitigations appear adequate.	
4.3	Review documentation provided by Triad and N3B. Verify that personnel are trained in emergency response.	Documents Reviewed: Example training record, see Attachment 1, Training. Personnel Contacted:	Training includes emergency response.
		Document review only.	
		Findings and Observations: None	
		Comments: None	
5.0 Recordkeepi	5.0 Recordkeeping and Reporting		
5.1	Review documentation provided by Triad and N3B. Verify that required records, such as manifests, inspection	<u>Documents Reviewed:</u> Operating procedures and records management procedure for Triad as shown in Attachment 1.	Records are stored for the required retention period.
	rogs, training records, and waste analysis results, are maintained for the specified retention periods.	Personnel Contacted: Document review only	
		Findings and Observations: None	
		Comments: Reviewed documentation and procedures. Procedures identify records generated and they are dispositioned in accordance with the records	

L&A Proprietary Information

Page 26 of 34

Section	Verification Method/LOI	Assessment/Summary	Result
		management procedure. Records are kept in a central system Electronic Document & Records Management Service (EDRMS) and are retrievable.	
5.2	Review documentation provided by Triad and N3B. Verify that manifests are properly completed for off-site hazardous waste shipments	 Documents Reviewed: Example manifests for shipment to WCS, see Attachment 1, Transportation Personnel Contacted: Document review only. Finding 01- manifest 116588-R-EPA-540, transport company not identified, and EPA number not noted in block 6. The transporter is properly identified on Form 540. This is a violation of 40 CFR 262 Appendix, which is a violation of 20.4.1.300 NMAC, incorporating 40 CFR 262.21. Observation 05- manifest 116546 R-EPA-540, transporter dated the manifest as 5/22/22 versus 5/22/25. Comments: Sample manifests were provided, and the generator, transporter and receiver EPA IDs were verified to be correct and current. One finding and one observation was noted. The site is transitioning to the eManifest system, once implemented, these errors will not occur as the pertinent information will be entered on the manifest automatically. The Triad off-site transportation function is undergoing an internal assessment from the Logistics, Packaging, and Transportation Group, the results of that assessment were not complete, but this practice is indicative of a robust assessment program supportive of identifying and correcting issues and supports continuous improvement. 	Manifests reviewed do communicate the required information to the transporter, the receiver, and emergency responders. Issues noted are administrative in nature.
5.3	Review documentation provided by Triad and N3B. Verify that exception reports are submitted when necessary.	Documents Reviewed: See Attachment 3 Personnel Contacted:	

L&A Proprietary Information

Page 27 of 34

Section	Verification Method/LOI	Assessment/Summary	Result
		Program Manager, EPC-WMP, Triad Team Leader EPC-CP, Triad WM-DO, Triad WM-DO, Triad Deputy CH TRU Program Manager, N3B Operations Manager, WFO-WETF, Triad Operations Center Manager, N3B Findings and Observations: None Comments: The only exceptions reviewed were those related to storage of the FTWCs in TA-54. These were properly reviewed and approved by procedure.	
4.5	Review documentation provided by Triad and N3B. Verify Biennial Reports submitted in accordance with regulations.	Documents Reviewed: Biennial reports for 2021 and 2023 as shown in Attachment 1, Permit and Related Documents. Personnel Contacted: Document review only. Findings and Observations: None Comments: Reports appear comprehensive and were submitted on time.	Reports appear comprehensive and submitted in accordance with the permit.
κ. κ.	Review documentation provided by Triad and N3B. Verify if other required notifications or reports submitted to regulatory agencies on time.	Documents Reviewed: Documents shown in Attachment 1, Permit and Related Documents. Personnel Contacted: Document review only. Findings and Observations: None	Some instances of late or non-reporting in the data provided, but no instances identified since 2019.

L&A Proprietary Information

Page 28 of 34

Section	Verification Method/LOI	Assessment/Summary	Result
		Comments: Reviewed NOV and self-reporting history back to 2011 as provided by Triad. There are some instances of non-reporting, the latest being in 2019, a hazardous waste characterization discrepancy, but there is no indication of any trend in reporting issues. Also reviewed the Triad procedure on official submittals and responses to and from the NMED. This procedure is a best management practice to consolidate the reporting requirements and provide step by step instructions to reduce the probability of non or late reporting.	
6.0 Transportation and Disposal	on and Disposal		
6.1	Review documentation provided by Triad and N3B. Verify that hazardous waste shipments are handled by licensed and permitted transporters and facilities.	Documents Reviewed: Transportation related documents, see Attachment 1, Transportation. Personnel Contacted: Group Leader Waste Management Services Findings and Observations: None Comments: Sample manifests were provided, and the generator, transporter and receiver EPA IDs were verified to be correct and current. There was one instance there the transporter was not identified (Finding 01) in Section 5.2.	Shipments reviewed were transported by properly permitted transporters to a licensed and permitted TSDF.
6.2	Review documentation provided by Triad and N3B. Verify that proper packaging and labeling is used for hazardous waste during transport, in accordance with DOT and other regulations.	Documents Reviewed: Transportation related documents, see Attachment 1, Transportation. Personnel Contacted: Group Leader Waste Management Services Findings and Observations: None	Packaging used is appropriate for the waste shipped and labeling is compliant.

L&A Proprietary Information

Page 29 of 34

Section	Verification Method/LOI	Assessment/Summary	Result
		Comments: Reviewed shipping procedures, manifests, and labeling. The site takes pictures of the container labels, seals, and shipment placarding before shipment. This is a noteworthy practice.	
6.3	Review documentation provided by Triad and N3B. Verify Land Disposal Restrictions (LDR) documentation and compliance certifications in place and accurate.	Documents Reviewed: LDR forms and shipping procedures as shown in Attachment 1. Personnel Contacted: Group Leader Waste Management Services, Triad Findings and Observations: None Comments: None	LDR forms are properly completed
7.0 Other			
7.1	Review documentation provided by Triad and N3B. Verify if recent changes in processes or procedures could affect hazardous waste management.	Documents as shown in Attachment 1. Personnel Contacted: Document review only. Findings and Observations: None Comments: Process and procedures currently in place do not have planned changes that will negatively impact hazardous waste management.	
7.2	Review documentation provided by Triad and N3B. Assess effectiveness of internal audit programs and	Documents Reviewed: Procedures and audit and assessment results as noted in Appendix 1, Permit and Related Documents and Compliance Information	Internal and external audit and assessment programs are in place effective.

L&A Proprietary Information

Page 30 of 34

Section	Verification Method/LOI	Assessment/Summary	Result
	corrective actions taken for identified deficiencies.	Personnel Contacted: Document review only.	
		Findings and Observations: None	
		Comments: Documents reviewed indicate a comprehensive system of internal and external audits and assessments supportive of a process of continual improvement. Several assessments looked at the root causes of recurrence of issues and the incidence of recurrence has decreased, especially since 2017.	
7.3	Review documentation provided by Triad and N3B. Assess communication channels and procedures for hazardous wasterelated matters.	Documents Reviewed: Transportation procedures, contingency plan, hazardous waste permit, and communications procedure as shown in Attachment 1, also see item 5.5. Personnel Contacted: Group Leader Waste Management Services	Communications channels appear effective and reporting on hazardous waste related matters appears timely and effective.
		Findings and Observations: None	
		Communication requirements are identified int he reviewed documents. Previous assessments do not indicate communications issues. The site emergency management functions were not reviewed.	



Attachment 3: Audit Plan Audit Plan Audit No. Triad WR12 T16 A

Audited Organization(s)
Triad and N3B

Audit Scope and Activities to be Audited

This audit will assess the adequacy of the hazardous waste programs implemented by Triad and N3B specifically as they apply to the four (4) Flanged Tritium Waste Containers (FTWC) currently stored on Pad 5 at Technical Area-54. It will assess the cradle to grave management of this hazardous waste and include:

- Waste Identification and Classification
- Waste Generation and Accumulation
- Personnel Training
- Emergency Preparedness and Prevention
- Recordkeeping and Reporting
- Transportation and Disposal

Audit Schedule

FTWC Hazardous Waste Compliance Audit					
Item	Party	Start	End		
Entrance Meeting	All	7/29/25			
First Day for New Documents to be provided	Triad	7/29/25			
Last Day for New Documents to be provided	Triad		8/5/25		
Review Documents	L&A	7/29/25	8/11/25		
Identify Desired Interviews	L&A	7/29/25	8/8/25		
Conduct Desired Interviews	All	7/31/25	8/11/25		
Prepare Draft Report	L&A	8/8/25	8/12/25		
Factual Accuracy Review	Triad	8/12/25	8/13/25		
Incorporate Comments	All	8/13/25	8/15/25		
Final Report	L&A		8/15/25		

Requirements and Applicable Documents

- Hazardous Waste Management Regulations, 20.4.1 NMAC
- Los Alamos National Laboratory Hazardous Waste Permit
- DOE Order 435.1, Radioactive Waste Management

Audit Personnel

Team Member	Roles
Pete Carson	Lead Auditor, Program Manager, SME LANL Waste, Reviewer, Author
Rene Echols	SME Waste Management, SME Regulatory Analysis, Reviewer, Author
John McCoy	SME Wase Management, SME Regulatory Analysis, Reviewer, Author
Brian McDaniel	SME on Squib Valves, Regulatory Analysis of Squib Valves, Reviewer, Author
Mark Senderling	SME Regulatory Analysis, Reviewer. Author
Ryan Hill	Technical Writer
Amanda Montoya	Administrative Support

Audit Lines of Inquiry

- 1. Waste Identification and Classification
 - a. How are waste streams identified and determined to be hazardous?
 - b. Are all hazardous waste streams properly categorized and assigned EPA hazardous waste codes?
 - c. Are records of waste analysis or process knowledge maintained and updated as needed?
- 2. Waste Generation and Accumulation
 - a. Is LANL a Large Quantity Site and does it have an EPA ID#?
 - b. Are hazardous waste containers properly stored and managed?
 - c. Compatible with waste contents?

- d. Containers tightly closed and latched (unless actively adding or removing waste)?
- e. Clearly labeled with the words "Hazardous Waste," the accumulation start date, and a description of the hazards in the container?
- f. Stored with adequate aisle space and segregated from incompatible wastes?
- g. In good condition without leaks, stains, or deterioration?
- h. Are satellite accumulation area requirements met?
- i. Are weekly inspections of hazardous waste storage areas conducted and documented?

3. Personnel Training

- a. Do all employees who handle or manage hazardous waste receive initial and annual refresher training?
- b. Are training records maintained and readily available for inspection?

4. Emergency Preparedness and Prevention

- a. Is there a contingency plan in place and up to date?
- b. Is emergency equipment, including alarms, communication devices, fire extinguishers, and spill control equipment, available and in good working condition?
- c. Are personnel trained in emergency procedures and are emergency response procedures included in the training plan?
- d. Are adequate eyewash stations and personal protective equipment (PPE) readily available where hazardous waste is handled?

5. Recordkeeping and Reporting

- a. Are all required records, such as manifests, inspection logs, training records, and waste analysis results, maintained for the specified retention periods?
- b. Are manifests properly completed for all off-site hazardous waste shipments?
- c. Are exception reports submitted when necessary?
- d. Are Biennial Reports submitted in accordance with regulations?
- e. Are any other required notifications or reports submitted to regulatory agencies on time?

6. Transportation and Disposal

- a. Are hazardous waste shipments handled by licensed and permitted transporters and facilities?
- b. Are proper packaging and labeling used for hazardous waste during transport, in accordance with DOT and other regulations?
- c. Are Land Disposal Restrictions (LDR) documentation and compliance certifications in place and accurate?

7. Other Items

- a. Any recent changes in processes or procedures that could affect hazardous waste management?
- b. Effectiveness of internal audit programs and corrective actions taken for identified deficiencies?

L&A Proprietary Information

Page 34 of 34

c. Communication channels and procedures for hazardous waste-related matters.

Leader Auditor: Pete Carson

Name

Signature & Date



ENCLOSURE 3

Meeting Summaries: Public Meeting, San Ildefonso, San Felipe, Open Tribal Meeting

Date: August 22, 2025

ALDESHQ-25-041

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



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Summary of public meeting Aug. 20, 2025, to discuss FTWCs Independent Technical Review

An estimated 50-60 turned out Wednesday night for the FTWCs public meeting, with another 100 people online. The meeting started promptly at 5:30 and ended at 7:30. Following introductions from the facilitator, Pat Moss opened with an explanation of the purpose of the meeting, its location as nearest the community closest to the operation and his appreciation of participation. Brian Watkins offered an overview of the operation and during the meeting, NMED's independent technical reviewer Craig Junio explained that until he was asked to conduct a technical review of LANL's approach to depressurization, he had absolutely no familiarity with the project. Junio's conclusion supports the LANL approach to depressurization.

Most of the public's remarks were comments rather than questions, and there were no issues brought up that NNSA or LANL have not addressed in the past. A couple of NMED local representatives explained their oversight role. Many of the questions/comments came from online posts from Tewa Women United who distributed and promoted talking points on the technical report by Dr. Arjun Makhijani, p[resident of the Institute for Energy and Environmental Research.

The most common issues/questions were:

- Why the rush, NukeWatch's Jay Coghlan
- We need more time, CCNS Joni Arends
- Dose calculation of women, children, elderly vs. EPA's adult receptor
- Independence of technical review
- · Lack of information on alternatives assessed
- Containment vessels, venting headspace gas into a fifth container or placing FTWCs into another container
- Publicly accessible, visual real-time monitoring of depressurization operation
- Disposition of public's comments

None of the issues brought up were new to the project, however, there is a takeaway for the NNSA LANL team: provide more information to the public on the alternatives considered, and provide additional detail on why dose calculations are protective of all citizens, including the most vulnerable.

Meeting with Pueblo de San Ildefonso on the LANL Flanged Tritium Waste Containers (FTWC) Project.

Date: Tuesday, August 12, 2025

Location: Pueblo de San Ildefonso, Governor's Conference Room

Summary:

On July 25, 2025, Governor Moquino requested an individual briefing (separate from the August Tribal Consultation Session scheduled on August 20, 2025) on the FTWC. Since NNSA has regular monthly meetings with San Ildefonso Pueblo's Governor to discuss NNSA and LANL updates and address any concerns, NNSA decided to provide a FTWC briefing to Governor Moquino during this month's meeting. Ted Wyka, NA-LA Field Office Manager and Brian Watkins, ALDFO Chief Operating Officer (LANL/Triad) provided an overview of the FTWC project, explained the prerequisites from New Mexico Environmental Department, and discussed next steps for the project following the tribal/public meetings on August 20, 2025.

Notes:

- Governor Moquino asked if this method/project has been done before?
 - NNSA/LANL explained that while the drums are standard containers for tritium, LANL is unique with this project and waste.
- o Governor Moquino asked what the alternatives for this project would be, were those considered or any suggested by regulators.
 - NNSA/LANL explained that the controlled depressurization is the same method since 2019. NNSA/LANL reassured that the method was chosen because it is the safest method and safety is always the priority.
- o Governor Moquino asked about the timeline of the project.
 - NNSA/LANL explained the timeline with NMED and the hope to move forward depressurization project between mid-September and mid-October, before the weather is too cold.
- Governor Moquino questioned why NNSA/LANL was having a tribal consultation meeting that was open to all Pueblos and Tribes within New Mexico – with San Ildefonso Pueblo being the closest neighboring Pueblo to LANL and likely the most impacted.
 - NNSA/LANL explained the NMED prerequisite for tribal consultation meeting in their June 9th letter and explained requirements, as a federal entity, to invite/consult all tribes. NNSA/LANL also discussed how at public meetings, some Pueblo/community members speak/voice concerns on behalf of Pueblos implying that NNSA does/did not meet with Pueblos and/or Pueblo leaders. We explained that it is our priority and responsibility to ensure Pueblo leaders are briefed on projects that may impact them.
- Lt. Gov. Martinez mentioned that he understands the project and is/has been supportive. He
 noted that the public and community members have misperceptions and misunderstandings of
 the project not understanding that this project has so many safety controls. He mentioned he
 will be at the tribal consultation and public meetings to ensure San Ildefonso Pueblo is
 represented.

San Felipe Pueblo Attendees:

Governor Christopher Moquino Lt. Governor and Environmental Director Raymond Martinez Tribal Administrator John Gonzalez

Readout

Meeting with Pueblo of San Felipe on the LANL Flanged Tritium Waste Containers (FTWC) Project

Date: Tuesday, August 19, 2025 Location: Pueblo of San Felipe, Governor's Conference Room

Summary:

During a meeting with Pueblo of San Felipe in May 2025 regarding another LANL project, San Felipe Pueblo leaders and staff had questions about the LANL FTWC project. NNSA offered to provide San Felipe Pueblo leaders and staff with a technical briefing about the depressurization of the FTWCs and to answer any questions. Pinu'u Stout, San Felipe Pueblo's Natural Resources Director, followed up on the technical briefing offer via email on June 16, 2025. On August 19, 2025, NNSA and LANL representatives met with San Felipe Pueblo to provide a FTWC project briefing that focused on the project logistics, schedule, and operation approvals and requirements. NNSA also explained the prerequisites from New Mexico Environmental Department to conduct an Independent Technical Review and conduct a Tribal Consultation meeting and public meeting to share the results of the review.

San Felipe Pueblo leadership asked questions about the controlled capture system and the possible dose calculation/exposure to their Pueblo (based on the closet monitoring station). San Felipe Pueblo suggested that NNSA/LANL put up monitoring stations at or near their Pueblo, and also near Cochiti Lake (their water source), to help ease community concerns of water, soil, and air contamination. San Felipe Pueblo's Governor and traditional leadership expressed concerns about community health and increased cancer rates. They also asked NNSA/LANL to consider San Felipe's impact when planning and conducting projects.

San Felipe Pueblo's Natural Resource Director asked for more data about the dose monitoring predictions and also provided feedback about the information shared on LANL's FTWC webpage – expressing that NNSA/LANL could do a better job explaining the project. In addition, San Felipe Pueblo inquired about the August 20 Tribal Consultation meeting on the FTWC, and asked what information would be shared and if New Mexico Environment Department was also attending the meeting. NNSA informed San Felipe Pueblo that the August 20th Tribal Consultation meeting was government-to-government and the State was not attending.

At the conclusion of the meeting, San Felipe Pueblo's Governor and Lt. Governor expressed support for the national security mission at LANL and emphasized that we continue to keep San Felipe Pueblo at the table and frequently briefed to continue transparency and open dialogue. NNSA/LANL thanked San Felipe Pueblo for the invitation to meet and present about the FTWC project.

San Felipe Pueblo Attendees:

Governor Anthony Ortiz; Lt. Governor James Tenorio; Tribal Administrator Daryl Candelaria; Natural Resource Director Pinu'u Stout; and Traditional Leaders

NNSA/LANL Attendees:

NNSA Los Alamos Field Office Deputy Manager, Pat Moss; LANL ALDFO Chief Operating Officer, Brian Watkins; NNSA Senior Tribal Affairs Advisor and Deputy Director of Intergovernmental Affairs, HQ, Margeau Valteau.

Readout

Tribal Consultation Meeting on the LANL Flanged Tritium Waste Containers (FTWC) Project
Date/Time: Wednesday, August 20, 2025, 1:00-4:00 PM
Location: Buffalo Thunder Resort, Vista Conference Room, Santa Fe, NM

Summary:

U.S. Department of Energy, National Nuclear Security Administration (NNSA) and Los Alamos National Laboratory (LANL) hosted a Tribal Consultation meeting on Wednesday, August 20, 2025, at the Buffalo Thunder Resort, Vista Conference Room, in Santa Fe, New Mexico from 1:00pm-4:00pm on the depressurization of the Flanged Tritium Waste Containers (FTWC) project. Twenty-seven Tribes and Pueblos (includes all 23 Tribes and Pueblos in New Mexico, Hopi Tribe in Arizona, Ute Mountain Ute Tribe and Southern Ute Tribe in Colorado, and Ysleta del Sur Pueblo in Texas) were invited to attend the Tribal Consultation meeting. Eighteen Pueblo and Tribal representatives joined the meeting in-person and four joined online, via Zoom. Attendees included the Governor and Lt. Governor of Santa Clara Pueblo, the Lt. Governor of San Ildefonso Pueblo, the Lt. Governor of Cochiti Pueblo, and staff and representatives from the Pueblos of Jemez, San Felipe, Pojoaque, Tesuque, and Nambe. In addition, the Deputy Director of Sovereign Energy, an organization that supports Pueblo and Tribal environmental advocacy and energy deployment, joined. Although the meeting was scheduled for two hours, the meeting lasted three hours to allow every Tribal and Pueblo leader and representative the opportunity to ask their questions and voice their concerns.

NNSA Senior Tribal Affairs Advisor, Margeau Valteau, opened the meeting and explained the purpose of the Tribal Consultation meeting and the Tribal/Pueblo engagement over the years on the FTWC project. Pat Moss, NNSA Los Alamos Field Office Deputy Manager, provided an overview of the project and Brian Watkins, LANL ALDFO Chief Operating Officer, presented an overview of the project logistics, schedule, and operation approvals and requirements. NNSA also explained the prerequisites from New Mexico Environmental Department to conduct an Independent Technical Review and conduct a Tribal Consultation meeting and public meeting to share the results of the review. Following the opening remarks and presentation, NNSA and LANL answered questions and heard feedback from the Tribal and Pueblo leaders and representatives.

Most of the questions from the Tribal and Pueblo leaders and representatives focused on the logistics of the venting and capture procedure, the air monitoring before, during and after the project, possible dose/exposure, and risk and decision-making behind the alternate procedures that were explored by LANL. Tribal and Pueblo leaders and representatives expressed concern about any dose of tritium going into the atmosphere, the overall long-term health and environmental impacts of LANL and the relation to the increased health concerns in their communities, the lack of trust with NNSA/LANL/federal government since the Manhattan project, timing of the project (early Fall will be hunting and harvest season for the Pueblos), and the need for funding support to the Tribes and Pueblo in order to keep up with and understanding NNSA/LANL projects. There was also a request to view cultural sites near TA-54. Tribal and Pueblo leaders and representatives emphasized the need for continued dialogue and transparency from NNSA/LANL, and one representative noted the increase of Tribal/Pueblo engagement from NNSA/LANL over the last years.

At the conclusion of the meeting, NNSA/LANL thanked the Tribal and Pueblo leaders and representatives for their attendance and updates of the project and schedule will be shared.



ENCLOSURE 4

New Mexico Environment Department Hazardous Waste Bureau Inspection Report, September 23, 2024

Date:	August 22, 2025	
-	ALDESHQ-25-041	

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



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NEW MEXICO ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1

Santa Fe, New Mexico 87505-6303





	шн	vw.env.nm.gov		
INSPECTION TYPE: Routin	ne Complaint Foll	ow-Up Compliance	Assistance Pre-Arranged	
DATE:	09/23/2024	TIME:	9:00 am	
FACILITY NAME	Los Alamos National Labor	atory EPA ID #	NM0890010515	
BUSINESS OWNER & ADDRESS	U.S. Dept. of Energy; Bikini	Atoll Road-SM30, Los Alam	os, NM 87545	
MAILING ADDRESS	P.O. Box 1663, Los Alamos	, NM 87545		
PROPERTY OWNER & ADDRESS	U.S. Dept. of Energy; P.O.	Box 1663, Los Alamos, NM 8	7545	
NOTIFIED AS: N/A	CURRENT	r STATUS:		
VSQG (<100 kg/mo.) SQG (100-1000 kg/mo.) LQG (>1000 kg/mo.) Transporter Transfer Facility TSD Facility - Unit Type(s): T Storage Used Oil:	\boxtimes	VSQG (<100 kg/mo.) SQG (100-1000 kg/mo.) LQG (>1000 kg/mo.) Transporter Transfer Facility TSD Facility - Unit Type(s): T Used Oil:	reatment & Storage	
ENTRY CONFERENCE: Present credentials to facilit Cite authority to enter site, State reasons(s) for and nat State objectives and proced	conduct inspection, ob ure of inspection	tain samples, take phot	os (NMSA § 74-4-4.3)	
RESPONSIBLE OFFICIAL(s):				

Title
Team Leader: Permitting/Comp.

INSPECTION PARTICIPANTS:

Name	Title	Email	Phone Number
	ESS-A		
	ESS-Supervisor		
	ESS-A		
	ESS-O		
	ESS-A		

DATE: 09/23/2024	FACILITY: LANL	EPA IDENTIFICATION #: NM0890010515

DATE OF LAST INSPECTION: 12/4/2023

CHECKLISTS COMPLETED: VSC	gg 🔲 sqg	<90 Day	Used Oil	Other:
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History, Size and Nature of Business:

Los Alamos National Laboratory ("LANL") is a U.S. Department of Energy ("DOE") facility operated jointly by Triad National Security ("Triad") and Newport News Nuclear BWXT ("N3B"). The facility was first established during World War II in 1943 as part of the Manhattan Project, and continues to advance scientific knowledge in nuclear physics, materials science, and other research fields including nuclear weapons and explosives. The facility consists of multiple structures occupying approximately 40 square miles on the Pajarito Plateau in Los Alamos County. LANL employs over 9,000 private and government employees.

Process Description

LANL conducts research and development on a wide range of disciplines. This work is performed at many laboratory and other process locations at the Facility, generating a variety of laboratory, maintenance, automotive, remediation, and mixed wastes. Wastes are typically stored in satellite locations and consolidated at one of several Central Accumulation Areas at the facility, and either picked up by the hazardous waste disposal contractor (see biennial report) directly at a CAA or brought to one of the storage areas permitted under LANL's Hazardous Waste Facility Permit for temporary storage and eventual pickup.

Areas such as those located at Technical Area ("TA") -54 store mixed waste containers from environmental remediation activities. These wastes, as well as other mixed wastes, are treated on-site by a variety of treatment techniques at locations and under procedures specified in the Hazardous Waste Facility Permit and under the schedule of a Site Treatment Plan. Many treated containers of Transuranic Mixed Waste will be destined for disposal at the Waste Isolation Pilot Plant in SE New Mexico, or at other locations as specified in the Biennial Report.

Waste Streams

Waste stream	Waste code	Process, location, container size	Transporter & EPA id # and TSDF w/ EPA id	Monthly generation
		See most recent biennial report		

Results of Inspection

NMED/HWB/CTAP inspectors met with DOE, Triad, and N3B representatives on the morning of September 23, 2024, conducted an entry conference, provided initial requests for documentation required under the Large Quantity Generator and Permit requirements, and separated into escorted teams to inspect the various Satellite Accumulation Areas ("SAAs"), Central Accumulation Areas ("CAAs", including several remediation site investigation derived waste storage sites), and permitted storage and treatment sites located throughout the TAs. Between September 23-25, NMED inspected all permitted areas, CAAs, and approximately 94% of the over 500 SAAs located throughout the installation.

NMED/HWB/CTAP team performed the inspection independently without any other agencies assisting during this annual inspection.

All hazardous waste management records were inspected by CTAP staff onsite during the inspection, no records were requested post inspection. LANL provided all access to requested documents during the inspection, no remote access was requested for file access or reviews, no request was made by CTAP for emailed documentation. Documentation

DATE: 09/23/2024 FACILITY: LANL EPA IDENTIFICATION #: NM0890010515 reviewed included waste manifests, training records, emergency planning documents, waste profiles, and inspection records.

NO VIOLATIONS WERE DISCOVERED OR OBSERVED DURING THIS FY-2025 ANNUAL INSPECTION

Areas of Concern

- a. Please ensure that all hazardous waste containers are properly kept protected from the impact of precipitation, including the use of tarping and other methods to ensure that containers are kept in good condition and prevented from rusting. NMED/HWB will be creating a "Barrel-Drum Container Management Policy" for LANL for clear guidance on reasonable efforts to maintain barrel-drum containers to reduce deterioration and provide quality expectations for LANL TA areas that contain radiation, mixed waste, or other barrels or drums.
- b. Please continue to educate and train LANL generators on the recent "Decontamination Policy" for much improvement and less confusion has been shown during this recent inspection.
- c. Please ensure that all recyclable materials are appropriately managed, and that speculative accumulation does not occur.
- d. Please ensure that contact information on postings at hazardous waste storage areas is kept current.
- e. Please continue to ensure that containers of waste pending analysis are labeled appropriately. Please
 have DOT related polices available for future inspections for regulators review related to low-level
 explosives.
- f. Please be aware of the proposed rule regarding regulation of PFAS as a hazardous constituent and evaluate site remediation projects accordingly. Please design some level of potential policy related to potential PFAS handling guidelines and or methods.
- g. Please remember to properly overpack containers if structural deficiencies are encountered. Continue to annotate in weekly inspections of substandard drums and input work orders and ensure corrective actions are tracked weekly inspections.
- h. Prepare for a future NMED/HWB drum-container management policy that will be provided to LANL requiring specific methods of managing drums and or containers in all TA areas or other mixed waste management areas. A formal drum-container checklist will also be provided to LANL from NMED/HWB.

Exit Conference

Date of Exit Conference:9/24/2024	Time of Exit: 1:30 pm		
Discussion/Explanation of Potential Violation(s):		Explain Review Process by NMED/HWB Management:⊠	
NMED Anticipated Timetable for Possible Enfor	cement Action(s):□	Explain Availability of On-Site Technical Assistance:⊠	
Advised Facility Representative, no potential viol obligated to comply with all applicable laws and	ation(s) of 20 NMAC 4.1 wer regulations.	e identified. Also, explained that Facility remains	
§ 74-1-10 NMSA 1978 (Repl. Pamp. 2000), NMED a specified time period; (2) issue a Compliance Compliance of civil penalty for any past or current violations of	o may: (1) issue a Notice of V order requiring compliance in up to \$10,000 per day of nor opriate relief, including a ter	mediately or within a specified time assessing a compliance with each violation or both; or (3) appropriately or permanent injunction. Any such order	

Participants:

Nam <u>e</u>	<u>Title</u>	Email address	Phone #
	ESS-A		
	ESS-A		
	Environmental Professional		
	EPC Division Leader		
	EPC Deputy Division Leader		
	EPC-WMP Group Leader		
	EPC-WMP Team Leader		
	EMP Director		
	WM Division Leader		
	WM-WGS Group Leader		
	WM-WGS Team Leader		
	WM-WGS Team Leader	, -	

Page of _

WM-WGS Team Leader		
DOE		
Environmental Professional		
N3B Regulatory Compliance Dir.		
ESS-O		
ESS-A		