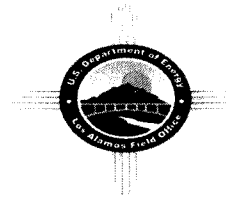


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ENTERED



Environmental Protection Division
Environmental Compliance Programs (ENV-CP)
PO Box 1663, K490
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Date: **JUL 23 2014**

Symbol: ENV-DO-14-0182

LAUR: 14-25416

Locates Action No.: Not Applicable

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

RECEIVED

JUL 23 2014

NMED
Hazardous Waste Bureau

Dear Mr. Kieling:

Subject: Transmittal of Revised Procedure for Nitrate Salt-Bearing TRU Waste Container Monitoring

The purpose of this letter is to transmit a procedure that has been updated from the original submission to the New Mexico Environment Department (NMED). The U.S. Department of Energy (DOE) and the Los Alamos National Security, LLC (LANS), the Permittees, submitted to the NMED the enclosed procedure (EP-AREAG-FO-DOP-1246, R.0) on May 29, 2014, as Attachment 5 of the *Revised LANL Nitrate Salt-Bearing Waste Container Isolation Plan*.

As discussed within the semi-weekly technical phone calls held between the NMED and Los Alamos National Laboratory (LANL) stipulated by the modification to Administrative Order No. 5-19001 issued by the NMED, the procedure titled *Nitrate Salt-Bearing TRU Waste Container Monitoring* has been revised. The updated procedure (Revision 2) has been included as Enclosure 1 to this letter. Revision 1 of the procedure was not submitted to the NMED as it was only approved for training and was not issued as a final procedure.



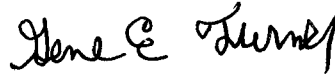
If you have comments or questions regarding this submittal, please contact Mark P. Haagenstad at (505) 665-2014 or Gene E. Turner at (505) 667-5794.

Sincerely,



Alison M. Dorries
Division Leader
Environmental Protection Division
Los Alamos National Security LLC

Sincerely,



Gene E. Turner
Environmental Permitting Manager
Environmental Projects Office
Los Alamos Field Office
U.S. Department of Energy

AMD:GET:MPH:LVH/ms

Enclosures: (1) EP-AREAG-FO-DOP-1246, R.2: Nitrate Salt-Bearing TRU Waste Container
Monitoring

Cy: Ryan Flynn, NMED, Santa Fe, NM, (E-File)
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EP-AREAG-FO-DOP-1246, R.2

Nitrate Salt-bearing TRU Waste Container Monitoring

Effective Date: 07/15/14

Hazard Class: Low Moderate High/Complex
Usage Mode: Reference UET Both UET & Reference

The Responsible Manager has determined that the following organizations' review/concurrence is required for the initial document, and for major revisions a same type and level review is required. Review documentation is contained in the Document History File:

LTP Operations Support
 LTP Engineering
 Quality Assurance
 Radiation Protection
 Industrial Hygiene and Safety

Criticality Safety
 Waste Management Coordinator
 Facility Operations Director (FOD)
 Shift Operations Manager
 Subject-Matter Expert

Responsible Manager, LTP-SSS Operations Manager

<u>Gail M. Welsh</u>	/ 114849	/ /s/ Kathy Sandoval for	/ 07/14/14
Name (print)	Z#	Signature	Date

Classification Review: N/A Unclassified UCNI Classified _____

<u>Kari Vitaletti</u>	/ 245399	/ /s/ Kari Vitaletti	/ 06/30/14
Name (print)	Z#	Signature	Date

Working Copy / Information Only (circle one)
 Initials / Date: _____ / _____

This document fully satisfies the requirements of P300, Integrated Work Management, in order to systematically describe the work activity, the associated hazards, and the controls that **MUST** be employed to mitigate the risks.

**Nitrate Salt-bearing TRU Waste
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UET

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REVISION HISTORY

Document No./Revision No.	Issue Date	Action	Description
EP-AREAG-FO-DOP-1246, R.0	May 29, 2014	Major	Generated to incorporate EP-AREAG-SO-1237, TA-54 Area G Temperature Readings of Remediated Nitrate Salt Containers, EP-AREAG-SO-1244, TA-54 Area G Nitrate Waste Container Inspection. A Job hazard analysis was developed and controls incorporated into the procedure through precautions, limitations, warnings, cautions and notes.
EP-AREAG-FO-DOP-1246, R.1	Approved for Training	Major Revision	Revise procedure to incorporate container numbers into the procedure, checks, and actions for HVAC Low D/P and make editorial corrections as necessary. Section 6, added note to clarify Attachment 2 lists the container numbers. Correct step 5.[6] to revise word from smoking to smoke. Added Step 6.[8] to address container number discrepancies. This revision does not introduce any new hazards.
EP-AREAG-FO-DOP-1246, R.2	July 15, 2014	Major Revision	Revise procedure to incorporate ENV-CP comments and make editorial corrections as necessary. This revision does not introduce any new hazards.

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1. PURPOSE

This procedure provides the instructions and directions for performing Nitrate Salt-bearing Transuranic (TRU) WASTE container monitoring (i.e., temperature readings of nitrate salt, nitrate salt waste container inspections).

2. SCOPE

This procedure applies to Los Alamos National Laboratory (LANL) Transuranic Programs Shipment and Safe Storage Project (LTP-SSS) Project personnel that will be conducting the nitrate salt TRU WASTE container monitoring. Activities associated with the nitrate salt-bearing TRU WASTE containers and the associated storage locations other than identified in this procedure will require prior approval from the Environmental and Waste Management Facility Operations Director (EWMO FOD) and the Associate Director of Environmental Programs (ADEP).

Inspections required by Attachment E, Inspection Plan, of the LANL Hazardous Waste Permit are performed in accordance with EP-DIV-DOP-0102, EWMO RCRA Inspections.

3. PRECAUTIONS AND LIMITATIONS

- Activities, items, and containers **SHALL** satisfy approved design specifications, regulatory requirements, process-specific parameters, and procedural requirements. Activities, items, or containers that do not conform to the approved specifications and requirements are considered nonconforming and Nonconformance Reports (NCRs) **SHALL** be generated in accordance with P330-6, Nonconformance Reporting, as required.
- When a worker observes an unsafe condition or act that may pose an imminent danger or other safety concern/hazard, the worker has the authority and responsibility to inform the worker engaged in the work and request that the work activity be paused and/or stopped based on the risk posed to the individual, the employees, the environment, or the facility in accordance with P101-18, Procedure for Pause/Stop Work.
- Not Applicable (N/A) is documented on the attachments during the performance of this procedure indicating information that is not required to be recorded.
- Personnel associated with this procedure **SHALL** review and understand the requirements of the Radiological Work Permit (RWP).

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3. PRECAUTIONS AND LIMITATIONS (continued)

- Personal protective equipment (PPE) **SHALL** be worn as required by the Radiological Work Permit (RWP) and Industrial Hygiene personnel.
- To comply with the intent of the ALARA Program, all personnel **SHALL** apply the principles of time, distance, and shielding when working with radiological materials.
- Infrared thermometer is equipped with a laser. Care should be taken to prevent pointing beam to eyes. Do not allow eyes of user or observers to become exposed to the beam.
- Waste containers with liquids (any amount or configuration) that have not been solidified (absorbed) and are stored or staged for a period longer than 24 hours **SHALL** be labeled "Free Liquids" and managed on secondary containment pallets or in structures designed to satisfy the secondary containment requirements (e.g., Sheds, Bldg. TA-54-1027, 1028, 1030, 1041, 144, 145, 146, and 177, and Dome 230).
- Support Services Subcontractors executing this procedure **SHALL** comply with the safety and health requirements documented in contractual agreements with the LANL.

4. PREREQUISITE ACTIONS

NOTE *The listed prerequisite actions may be completed in any order.*

4.1 Planning and Coordination

PIC/Designee

- [1] **ENSURE** that the performance of this procedure has been scheduled on the TA-54 Area G schedule.
- [2] **ENSURE** that a pre-job briefing is conducted for all personnel involved in the performance of this procedure, in accordance with EP-DIV-AP-0112, EWMO Pre-Job Briefing.
- [3] **ENSURE** that the procedure is the latest revision, and **IDENTIFY** this document as Working Copy or Information Only on the Title Page.

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4.1 **Planning and Coordination (continued)**

- [4] **ENSURE** that, as a minimum, the following personnel trained to the use of this procedure are available for the performance of this procedure, as required:
- Two Operators
 - One Radiological Control Technician (RCT) [when performing operations in Contamination Area (CA)]

Operator/Designee

- [5] **IF** performing Section 6, TA-54 Area G Temperature Readings of Nitrate Salt TRU Waste Containers,
THEN:

- [A] **ENSURE** that the applicable PermaCon round sheet (i.e., Dome 231, Dome 375) was completed.
- [B] **ENSURE** that an RWP has been issued for the planned activity, as applicable.

4.2 **Materials and Equipment**

4.2.1 Measuring and Test Equipment (M&TE)

Operator/Designee

- [1] **ENSURE** that a calibrated infrared thermometer is available, and **RECORD** the brand name, model, calibration due date, and file number on the applicable attachments (Attachment 2 or 3).
- [2] **IF** the MT&E has exceeded the calibration due date,
THEN:
- [A] **IDENTIFY** the item as not to be used (e.g., apply a Calibration Expired label) and **SEGREGATE** the item to prevent use.
- [B] **NOTIFY** supervision for the applicable actions.

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**5. INSTRUCTIONS—NITRATE SALT TRU WASTE CONTAINER VISUAL
INSPECTIONS**

This section is a stand-alone section and may be performed independently of or in conjunction with other sections of this procedure.

This activity will be performed at a minimum of once an hour.

Operator/Designee

[1] **ENSURE** that the prerequisite actions have been completed.

NOTE *Waste containers that are stored in a PermaCon (e.g., TA-54-231 or TA-54-375) will be visually inspected from a point outside of the PermaCon without entering the Contamination Area (CA).*

[2] **RECORD** the following information on Attachment 1, Nitrate Salt TRU Waste Container Visual Inspection Data Sheet:

- Date and Time (24 hours)
- Location (e.g., Storage Areas: Dome TA-54-230, Dome TA-54-231 PermaCon, Dome TA-54-232, or Dome TA-54-375 PermaCon)

[3] **DETERMINE** whether the following applicable PermaCon HVAC system components (TA-54-231 or TA-54-375) are operational, and **CHECK** (✓) YES or NO on Attachment 1:

Dome 375

- FE-001, VFD-001 is ON and set to HAND, 30 to 60 Hz, and
- FE-002, VFD-002 is ON and set to HAND, 30 to 60 Hz, and
- PDA-004, PDA-005, and PDA-006 alarm light are not illuminated (control room), and PDA-001, PDA-002, and PDA-003 alarm light are not illuminated (panel outside cell)

Dome 231

- FE-1000, ON and operating
- FE-2000, ON and operating
- FE-3000, ON and operating
- FE-4000, ON and operating
- PDA-1001 and PDA-2001 alarm light are not illuminated (control room), and PDI-1000 and PDI-2000 alarm light are not illuminated (panel outside cell)

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**5. INSTRUCTIONS—NITRATE SALT TRU WASTE CONTAINER VISUAL
INSPECTIONS (continued)**

[4] **IF** NO was checked in the previous step,
THEN:

[A] **GO TO** EP-AREAG-RM-ARP-1123, 231 PermaCon Low D/P Alarm, or
EP-AREAG-RM-ARP-1150, 375 PermaCon Low Cell D/P Alarm.

[B] **NOTIFY** TA-54 Operations Center and Shift Operation Manager (SOM) for
applicable actions.

[5] **VISUALLY INSPECT** nitrate salt waste containers for indications of an abnormal
condition including an internal reaction (e.g., chemical/thermal) and/or loss of container
integrity:

- Evidence of deterioration such as signs of discoloration, paint peeling or yellowing
- Loss of container integrity such as evidence of leakage, or lid compromised
- Bulging such as pressurized, expansion of side walls, or round bottom
- Chemical reaction such as smoke or release of internal contents to atmosphere
- Signs of smoke and fire from a container

NOTE 1 *During back-shifts or off-shifts, or if the TA-54 Operations Center is not available, the Shift Operations Manager (SOM) can be notified directly at 505-231-8289. Additional notifications to the Emergency Operations Support Center (EOSC), 505-667-6211, or 911, are performed based upon the severity of the situation or per the direction from the SOM.*

NOTE 2 *A follow up call to 911 should be conducted at a safe location from the incident after the activation of a manual pull.*

[6] **IF** a chemical reaction such as smoke or release of internal contents to the atmosphere
OR signs of smoke and fire from a container are discovered,
THEN:

[A] **ACTIVATE** the manual pull station in the general area of the incident if safe to do
so.

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**5. INSTRUCTIONS—NITRATE SALT TRU WASTE CONTAINER VISUAL
INSPECTIONS (continued)**

- [B] **PERFORM** an Emergency response in accordance with EP-DIV-BEP-20048, EWMO Division Building Emergency Plan (BEP), to include:
- **SUSPEND** work.
 - **WARN** others.
 - **ISOLATE** immediate area.
 - **EVACUATE** to an upwind Assembly/Muster area from the incident.
 - **MAKE** notifications [e.g., Shift Operations Supervisor (SOS), Operations Center Operator (OCO), EOSC, 911].
- [C] **CHECK** (√) UNSAT for the inspection location, and **DOCUMENT** the condition on Attachment 1 when in a safe area and at a time when operationally convenient.
- [D] **GO** to Section 8.1, Disposition.
- [7] **IF** evidence of deterioration is discovered, such as signs of discoloration, paint peeling or yellowing, loss of container integrity such as evidence of leakage or a compromised lid, bulging such as pressurized, expansion of side walls, or round bottom are discovered, **THEN:**
- [A] **PERFORM** an off-normal response in accordance with EP-DIV-BEP-20048, to include:
- **SUSPEND** work.
 - **WARN** others.
 - **ISOLATE** the immediate area.
 - **MOVE-AWAY** upwind from the area of concern.
 - **MAKE** Notifications (e.g., Operations Center and SOS).
- [B] **CHECK** (√) UNSAT for the status of the inspection location, and **DOCUMENT** the condition on Attachment 1 when in a safe area and at a time when operationally convenient.
- [C] **GO** to Section 8.1, Disposition.
- [8] **CHECK** (√) SAT for the status of the affected inspection location on Attachment 1.
- [9] **RECORD** initials and Z number on Attachment 1.
- [10] **REPEAT** Steps 5.[2] through 5.[9] for each nitrate salt TRU WASTE container storage location.

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**6. INSTRUCTIONS—TA-54 AREA G TEMPERATURE READINGS OF NITRATE SALT
TRU WASTE CONTAINERS**

This section is a stand-alone section and may be performed independently of, or in conjunction with other Instructions sections.

This section provides the instructions for performing hourly or daily temperature readings.

NOTE *Waste container temperature measurements are obtained by entering the applicable PermaCon (e.g., TA-54-231 or TA-54-375) Contamination Area and individually measuring and recording the waste container temperatures.*

Operator/Designee

- [1] **ENSURE** that all prerequisite actions have been completed.
- [2] **IF** any time during the performance of this section an abnormality, such as questionable integrity and/ or a chemical odor, smell, are discovered,
THEN:
- [A] **PERFORM** an off-normal response in accordance with EP-DIV-BEP-20048, to include:
- **SUSPEND** work.
 - **WARN** others.
 - **ISOLATE** the immediate area.
 - **MOVE-AWAY** upwind from the area of concern.
 - **MAKE** Notifications (e.g., Operations Center and SOS).
- [B] **DOCUMENT** the UNSAT condition and **PROVIDE** comments on the applicable attachments (Attachment 2 or 3) when in a safe area and at a time when operationally convenient.

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6. INSTRUCTIONS—TA-54 AREA G TEMPERATURE READINGS OF NITRATE SALT TRU WASTE CONTAINERS (continued)

NOTE 1 *This section provides the instructions for performing hourly or daily temperature readings.*

NOTE 2 *Attachment 2, TA-54 Area G Nitrate Salt TRU Waste Container Daily Temperature Data Sheet, is setup to perform daily temperature readings. Attachment 3, Area G Nitrate Salt TRU Waste Container Hourly Temperature Data Sheet, is set up for documenting hourly readings of one or more containers as directed by the LTP-SSS management.*

[3] **DETERMINE** whether the daily or hourly temperature readings are to be conducted as directed by the SOM.

[4] **RECORD** the date range and start time on the applicable attachments (Attachment 2 or 3).

[5] **IF** non-nitrate control drums are available,
THEN:

[A] **MEASURE** the temperature (in °F) on the top center of each of the four control drums using an infrared thermometer, and **RECORD** the temperatures on the applicable attachments (Attachment 2 or 3).

[B] **CALCULATE** the average temperature (in °F) of the four control drums, and **RECORD** the average temperature on the applicable attachments (Attachment 2 or 3).

[(Drum #1 temp. + Drum #2 temp. + Drum #3 temp. + Drum #4 temp.) ÷ 4 = Control Drums Avg Temp]

[6] **IF** control drums are **NOT** available,
THEN MEASURE the ambient temperature (e.g., the wall of the contamination control enclosure or designated location) using an infrared thermometer, and **RECORD** the ambient temperature (in °F) on the applicable attachments (Attachment 2 or 3).

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6. INSTRUCTIONS—TA-54 AREA G TEMPERATURE READINGS OF NITRATE SALT TRU WASTE CONTAINERS (continued)

NOTE 1 *Attachment 2 is pre-populated with the container numbers for Dome 231 PermaCon and Dome 375 PermaCon.*

NOTE 2 *Standard waste boxes (SWBs) that were not packaged for Waste Isolation Pilot Plant (WIPP) shipment (without a LASBxxxxx number) identify the location of the nitrate salt-bearing drum inside by the location of the container label on the outside of the SWB.*

NOTE 3 *SWBs that were packaged for WIPP shipment (with a LASBxxxxx number) do not have the location of the nitrate salt-bearing drum identified on the outside of the SWB.*

- [7] **IF** the nitrate salt-bearing drum location within the SWB is known,
THEN MEASURE the temperature (in °F) on the top approximate center of each nitrate salt drum, through the SWB lid, using an infrared thermometer, and **RECORD** the container number, as applicable, and temperature on the applicable attachment (Attachment 2 or 3).
- [8] **IF** the nitrate salt-bearing drum location within the SWB is **NOT** known,
THEN MEASURE the temperature (in °F) on the top approximate center of each nitrate salt drum in the SWB, through the SWB lid, using an infrared thermometer, and **RECORD** the container number, as applicable, and the highest temperature measurement on the applicable attachment (Attachment 2 or 3).
- [9] **IF** a deficiency with a container number pre-populated on Attachment 2 is discovered,
THEN:
- [A] **SUSPEND** operations.
- [B] **NOTIFY** the TA-54 Operations Center and SOM for guidance and direction.

Second Operator/Designee

- [10] **ENSURE** that the container number and temperature recorded for the containers and control drums is correct.

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**6. INSTRUCTIONS—TA-54 AREA G TEMPERATURE READINGS OF NITRATE SALT
 TRU WASTE CONTAINERS (continued)**

NOTE *Attachment 2 is pre-populated with the container numbers in Dome 231 PermaCon
 and Dome 375 PermaCon.*

[11] **IF** container number and temperature are recorded incorrectly,
THEN RECONCILE on the applicable attachments (Attachment 2 or 3).

Operator/Designee

[12] **IF** a container's temperature is greater than 10 °F higher than the control group average
 or ambient temperature, as applicable,
THEN:

[A] **EXIT** the PermaCon.

[B] **NOTIFY** the TA-54 Operations Center and **REQUEST** direction.

TA-54 Operations Center

[C] **NOTIFY** Operations Manager and EOSC at 505-667-6211.

Operator/Designee

[13] **IF** a container's temperature is greater than 15 °F higher than the control group average
 or ambient temperature, as applicable,
THEN:

[A] **EXIT** the PermaCon.

[B] **NOTIFY** the TA-54 Operations Center.

TA-54 Operations Center

[C] **REQUEST** support from EOSC at 505-667-6211 and **NOTIFY** Operations
 Manager.

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6. INSTRUCTIONS—TA-54 AREA G TEMPERATURE READINGS OF NITRATE SALT TRU WASTE CONTAINERS (continued)

NOTE *The control group of non-nitrate drums, or the ambient temperature of the contamination control enclosure, will be measured a second time after measuring the temperature of the last nitrate salt waste container.*

[14] **MEASURE** the temperature (in °F) on the top center of each of the four control drums (non-nitrate), or ambient temperature of the contamination control enclosure, using an infrared thermometer, and **RECORD** the temperatures on the applicable attachments (Attachment 2 or 3).

[15] **IF** measuring the temperature of control drums, **THEN CALCULATE** the average temperature (in °F) of the four control drums, and **RECORD** the average temperature on the applicable attachments (Attachment 2 or 3).
[Drum #1 temp. + Drum #2 temp. + Drum #3 temp. + Drum #4 temp.] ÷ 4 = Average temp. of control drums]

[16] **RECORD** the end time on the applicable attachments (Attachment 2 or 3).

[17] **RECORD** "N/A" (not applicable) for temperature readings that were not recorded (e.g., if the ambient temperature was measured, then "N/A" control drum and average temperature entries) on the applicable attachment (Attachment 2 or 3).

Operator and SOM

[18] **INITIAL** on the applicable attachment (Attachment 2 or 3).

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**7. INSTRUCTIONS—TA-54 AREA G EAST ENTRANCE/ROAD INTO AREA G
MONITORING**

This section is a stand-alone section and may be performed independently of, or in conjunction with other Instructions sections.

This section is performed in response to significant precipitation (rain fall greater than 0.25 inches within 30 minutes or greater than a 0.5 inches in 24 hours of rain fall) that may cause damage or road deterioration of east entrance/road into TA-54 Area G. Weather information may be obtained from TA-54 Meteorological Station or National Oceanic and Atmospheric Administration (NOAA).

Shift Operations Manager

- [1] **VISUALLY INSPECT** the TA-54 Area G East entrance/road for deterioration (e.g., washout).

- [2] **IF** deterioration is observed,
THEN:
 - [A] **NOTIFY** Maintenance and Site Services.

 - [B] **GENERATE** a Facility Service Request (FSR) to repair roadway as applicable.

 - [C] **NOTIFY** the Los Alamos Fire Department (LFPD) of road condition.

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8. POST-PERFORMANCE ACTIVITY**8.1 Disposition****Operator**

- [1] **SIGN** and **DATE** on the applicable attachments (Attachments 1 through 3).

SOM or designee

- [2] **REVIEW** the applicable attachments (Attachments 1 through 3) for accuracy and completeness.
- [3] **SIGN** and **DATE** on the applicable attachments (Attachments 1 through 3).

NOTE *Completing a Post-Job Review may be accomplished using the applicable P300 form or online (the preferred method since the institution has access to feedback and lessons learned <http://int.lanl.gov/safety/iwmc/> [Click on the Submit IWD Part 4 Post-Job Review]).*

- [4] **IF** any of the following occur:
- A new activity was completed for the first time
 - A request was made by anyone involved with the performance of this procedure to perform a post-job review
 - An abnormal event occurred
 - A revision to an existing procedure was issued and it has been determined by the procedure owner or designee that a Post-Job Review is required
- THEN PERFORM** a Post-Job Review in accordance with P300.
- [5] **IF** the Post-Job Review identified any necessary changes to this procedure, **THEN INITIATE** a revision to this procedure.

**Nitrate Salt-bearing TRU Waste
Container Monitoring**

Document No.: EP-AREAG-FO-DOP-1246
 Revision: 2
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8.2 Records Processing

Operator/Designee

[1] Ensure that documents generated by the performance of this procedure are processed as follows:

Record Identification	Record Type Determination	Protection/Storage Methods	Processing Instructions
Attachment 1, Nitrate Salt TRU Waste Container Visual Inspection Data Sheet	QA Record	Supervision SHALL implement a reasonable level of protection to prevent loss and degradation. Records should be maintained in a one-hour fire rated metal file cabinet when <u>not</u> in use.	When the records are ready for final disposition, the record is transferred to Records Management in accordance with EP-DIR-AP-10003, Records Management Procedure For ADEP Employees.
Attachment 2, TA-54 Area G Nitrate Salt TRU Waste Container Daily Temperature Data Sheet			
Attachment 3, TA-54 Area G Nitrate Salt TRU Waste Container Hourly Temperature Data Sheet			

9. REFERENCES

ABD-WFM-002, Technical Safety Requirements (TSRs) for TA-54, Area G.

EP-AREAG-RM-ARP-1123, 231 PermaCon Low D/P Alarm

EP-AREAG-RM-ARP-1150, 375 PermaCon Low Cell D/P Alarm

EP-DIR-AP-10003, Records Management Procedure For ADEP Employees

EP-DIV-AP-0112, EWMO Pre-Job Briefings

EP-DIV-DOP-0102, EWMO RCRA Inspections

LANL Hazardous Waste Permit

P101-18, Procedure for Pause/Stop Work

P121, Radiation Protection

P300, Integrated Work Management

P330-6, Nonconformance Reporting

EP-DIV-BEP-20048, EWMO Division Building Emergency Plan (BEP)

**Nitrate Salt-bearing TRU Waste
Container Monitoring**

Document No.: EP-AREAG-FO-DOP-1246
Revision: 2
Effective Date: 07/15/14
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ATTACHMENT 1

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5.[2] Date: From _____ to _____ Location: _____

Comments: _____

8.1[1] Performed By: _____ / _____ / _____ / _____
Operator (print) Signature Z# Date

8.1[3] Reviewed By: _____ / _____ / _____ / _____
SOM or designee (print) Signature Z# Initials Date

UET

ATTACHMENT 2

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TA-54 AREA G NITRATE SALT TRU WASTE CONTAINER DAILY TEMPERATURE DATA SHEET

6.[4] Date: From _____ to _____

Page ____ of ____

	Mon 6.[4]	Tue 6.[4]	Wed 6.[4]	Thu 6.[4]	Fri 6.[4]	Sat 6.[4]	Sun 6.[4]
	Start Time: _____	Start Time: _____	Start Time: _____	Start Time: _____	Start Time: _____	Start Time: _____	Start Time: _____
Calibrated Infrared Thermometer 4.2.1.[1]	Brand: _____ Model: _____ Cal. Due Date: _____ File Number _____	Brand: _____ Model: _____ Cal. Due Date: _____ File Number _____	Brand: _____ Model: _____ Cal. Due Date: _____ File Number _____	Brand: _____ Model: _____ Cal. Due Date: _____ File Number _____	Brand: _____ Model: _____ Cal. Due Date: _____ File Number _____	Brand: _____ Model: _____ Cal. Due Date: _____ File Number _____	Brand: _____ Model: _____ Cal. Due Date: _____ File Number _____
Control drum #1 6.[5][A]	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)
Control drum #2 6.[5][A]	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)
Control drum #3 6.[5][A]	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)
Control drum #4 6.[5][A]	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)
Avg. Control Drum Temp. [(Drum #1 + Drum #2 + Drum #3 + Drum #4) ÷ 4] 6.[5][B]	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F
Ambient Temperature 6.[6]	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F

UET

ATTACHMENT 2
Page 2 of 8

6.[4] Date: From _____ to _____

Page ____ of ____

Container ID #	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])
TA-54-231							
S818435							
S802833							
S801676							
S816810							
70069							
S822844							
S825879							
S793724							
S813545							
S822713							
S802739							
69907							
S804995							
S816434							
S805289							
S862888							
70072							
S823184							
S822599							
69904							
S805051							
S864213							
S853714							
S803078							
S825878							

UET

ATTACHMENT 2

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6.[4] Date: From _____ to _____

Page ____ of ____

Container ID #	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])
TA-54-231 (cont.)							
S823124							
S804948							
S813385							
S842446							

UET

ATTACHMENT 2
 Page 4 of 8

6.[4] Date: From _____ to _____

Page ____ of ____

Container ID #	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])
TA-54-375 Cell 1							
68685							
68540							
68553							
69445							
69618							
69013							
LASB50522							
LASB50452							
LASB50431							
LASB50069							
LASB50073							
69636							
69616							
69417							
69620							
69520							
69641							
69298							
LASB02203							
TA-54-375 Cell 2							
LASB02198							
68638							
69615							
69635							

UET

ATTACHMENT 2

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6.[4] Date: From _____ to _____

Page ____ of ____

Container ID #	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])
TA-54-375 Cell 2 (cont.)							
69642							
69630							
69633							
68430							
68631							
69634							
68567							
94227							
LASB50442							
69644							
LASB50443							
69638							
68624							
68507							
69568							
69553							
69598							
LASB50559							
69015							
69639							
69637							
TA-54-375 Cell 3							
69519							
69645							

UET

ATTACHMENT 2
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6.[4] Date: From _____ to _____

Page ____ of ____

Container ID #	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])	Temp (°F) (6.[7]/6.[8])
TA-54-375 Cell 3 (cont.)							
94068							
93605							
69548							
69604							
LASB50529							
LASB50418							
69036							
LASB50451							
69559							
LASB50448							

UET

ATTACHMENT 2

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6.[4] Date: From _____ to _____

Page ____ of ____

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Control drum #1 6.[14]	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)
Control drum #2 6.[14]	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)
Control drum #3 6.[14]	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)
Control drum #4 6.[14]	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)	Temp ____ (°F)
Avg. Control Drum Temp. [(Drum #1 + Drum #2 + Drum #3 + Drum #4) ÷ 4] 6.[15]	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
Ambient Temperature 6.[14]	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
	End Time: _____	End Time: _____	End Time: _____	End Time: _____	End Time: _____	End Time: _____	End Time: _____
	Operator: _____ SOM: _____	Operator: _____ SOM: _____	Operator: _____ SOM: _____	Operator: _____ SOM: _____	Operator: _____ SOM: _____	Operator: _____ SOM: _____	Operator: _____ SOM: _____

Comments:

UET

ATTACHMENT 2

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6.[4] Date: From _____ to _____

Page ____ of ____

Performed by:

Reviewed by:

Operator (print)	Signature	Z#	Initials	Date
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/
/	/	/	/	/

SOM or designee (print)	Signature	Z#	Initials	Date
/	/	/	/	/

UET

ATTACHMENT 3

Page 1 of 4

TA-54 AREA G NITRATE SALT TRU WASTE CONTAINER HOURLY TEMPERATURE DATA SHEET

6.[4] Date: From _____ to _____ Location: _____

Page ____ of ____

	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)
Calibrated Infrared Thermometer 4.2.1.[1]	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Control drum #1 6.[5][A]	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)
Control drum #2 6.[5][A]	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)
Control drum #3 6.[5][A]	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)
Control drum #4 6.[5][A]	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)	Temp _____ (°F)
Avg. Control Drum Temp. [(Drum #1 + Drum #2 + Drum #3 + Drum #4) ÷ 4] 6.[5][B]	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F
Ambient Temperature 6.[6]	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F

Nitrate Salt TRU WASTE Container Monitoring ^{Enclosure 1}

UET

ATTACHMENT 3
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6.[4] Date: From _____ to _____ Location: _____

Page ____ of ____

Control drum #1 6.[14]	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)
Control drum #2 6.[14]	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)
Control drum #3 6.[14]	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)
Control drum #4 6.[14]	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)	Temp _____(°F)
Avg. Control Drum Temp. [(Drum #1 + Drum #2 + Drum #3 + Drum #4) ÷ 4] 6.[15]	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F
Ambient Temperature 6.[14]	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F
	End Time: _____	End Time: _____	End Time: _____	End Time: _____	End Time: _____	End Time: _____	End Time: _____	End Time: _____	End Time: _____	End Time: _____	End Time: _____	End Time: _____	End Time: _____	End Time: _____
	Operator: _____	Operator: _____	Operator: _____	Operator: _____	Operator: _____	Operator: _____	Operator: _____	Operator: _____	Operator: _____	Operator: _____	Operator: _____	Operator: _____	Operator: _____	Operator: _____
	SOM: _____	SOM: _____	SOM: _____	SOM: _____	SOM: _____	SOM: _____	SOM: _____	SOM: _____	SOM: _____	SOM: _____	SOM: _____	SOM: _____	SOM: _____	SOM: _____

UET

ATTACHMENT 3

Page 4 of 4

6.[4] Date: From _____ to _____ Location: _____

Page ____ of ____

Comments:

Performed by:

Reviewed by:

Operator (print)	Signature	Z#	Initials	Date
/	/	/	/	/
Operator (print)	Signature	Z#	Initials	Date
/	/	/	/	/
Operator (print)	Signature	Z#	Initials	Date
/	/	/	/	/
Operator (print)	Signature	Z#	Initials	Date
/	/	/	/	/
Operator (print)	Signature	Z#	Initials	Date
/	/	/	/	/
Operator (print)	Signature	Z#	Initials	Date

SOM or designee (print)	Signature	Z#	Initials	Date
/	/	/	/	/