From: Haagenstad, Mark P

Sent: Tuesday, September 23, 2014 4:44 PM

**To:** Ryan.Flynn@state.nm.us; Jeff.Kendall@state.nm.us; tom.blaine@state.nm.us; John Kieling; steve.pullen@state.nm.us; Kliphuis, Trais, NMENV; Timothy.Hall@state.nm.us; siona.briley@state.nm.us; ricardo.maestas@state.nm.us; Gregory.Lauer@state.nm.us; steve.holmes@state.nm.us

**Cc:** Pete Maggiore; Silas DeRoma; Cummings, Lisa K; Nickless, David J; Bishop, M. Lee; Turner, Gene E; Armijo, Karen (CONTR); Wallace, Terry C; Mousseau, Jeffrey David; Cox, Daniel Ray; Torres, Enrique; Woitte, Deborah Kay; Johns-Hughes, Kathryn W; Clemmons, Steve; Allen, Don; George, Victoria A; Roberts, Kathryn Margaret; Brandt, Michael Thomas; Sharp-Geiger, Raeanna Racine; Dorries, Alison Marie; Grieggs, Tony; Bacigalupa, Gian A; Vigil-Holterman, Luciana R; Alexander, Rick A; Baumer, Andy; Martinez, Saundra; Sauer, Selena Z; Wood, Yvonne Barbara; Schreiber, Arleen Thorn; Maestas, Pamela Therese; Hargis, Kenneth Marshall; Diaz, Tammy; Juarez, Catherine L

Subject: Daily Technical Submission - September 23, 2014

Attached is the written daily technical submission for today. The Permittees are submitting this pursuant to: Section 19 of the May 19, 2014, *Administrative Order*; the July 10, 2014 letter from NMED regarding *Modification to May 19, 2014, Administrative Order*; and Section IX of the September 19, 2014, *LANL Nitrate Salt-Bearing Waste Container Isolation Plan, Revision 2*.

Please contact me if additional information would be helpful. Thank you.

Mark Haagenstad Environmental Protection Division Compliance and Permitting Group Los Alamos National Laboratory

Office: (505) 665-2014 Mobile: (505) 699-1733

### NMED / LANL Technical Summary

### **September 23, 2014**

### **Participation:**

- New Mexico Environment Department: Tim Hall, Siona Briley, and Gregory Lauer.
- LANL Los Alamos Field Office: Gene Turner and David Nickless.
- LANL Los Alamos National Security: Mark Haagenstad, Alison Dorries, Tori George, Don Allen, Tammy Diaz, and Luciana Vigil-Holterman.

### **LANL Technical Update:**

- Location of Nitrate Salt-Bearing Wastes
  - o Remediated nitrate salt-bearing waste containers.
    - All containers remain in the 375 Permacon.
  - o Unremediated nitrate salt-bearing waste containers.
    - All containers remain in the 231 Permacon.
- Monitoring Daily Temperature
  - o Temperatures remain below 90°F.
    - Previous day's daily temperature data attached.
- Monitoring Visual Inspections
  - No abnormal conditions.
- Monitoring headspace gas (HSG)
  - Performed on SWBs
    - Containers (SWB) 68685 and SB50522.
      - Continue daily head space gas (HSG) sample collection.
        - September 23, 2014 HSG data attached
          - H<sub>2</sub>, CO, CO<sub>2</sub> and N<sub>2</sub>O
    - Other containers
      - Will initiate monthly minimum of once per month HSG sampling in October.
        - To date in September, LANL has conducted HSG sampling on 7 SWBs. HSG sampling was conducted on 8 additional SWBs today.
        - Note: LANL previously conducted HSG sampling on each of the 55 SWBs that contain 55-gallon drums of remediated nitrate salt-bearing waste (under Section I of the Isolation Plan).

- Additional measures currently underway
  - As a conservative measure, LANL is currently conducting additional monitoring. This additional monitoring includes:
    - Containers (SWB) 68685 and SB50522.
      - o LANL continuing solid phase micro-extraction.
      - Continue hourly temperature measurements.
        - o Previous day's hourly temperature data attached. Temperatures remain below 90°F.
    - Five (5) other SWB overpacks (containing 55-gallon drums of remediated nitrate salt-bearing waste).
      - Continue bi-weekly HSG sample collection.
- Anticipated Changes to Nitrate Salt-Bearing Waste Containers (e.g. movement, repackaging).
  - o Currently, no further movements or re-packaging are planned.
- Other:
  - o No new items.

### **Summary Chart - Requested Information / Pending Issues:**

	Requested Information	Actionee	Status	Completion Date
1.	NMED contact / process for LANL to notify NMED under the Revised Isolation Plan (e.g.,	NMED		Complete
	24 hour notices).			June 5, 2014
2.	Keep NMED informed on the status of ongoing chemistry / analytical work.	LANL		Complete June 9, 2014
3.	On upcoming daily call, provide additional discussion on the potential for liquids in the 350 post-1991 cemented containers (including a discussion of the review of RTR tapes).	LANL		Complete  July 6, 2014 (Discussion on call)  July 18, 2014 (Meeting held)
4.	On upcoming call, provide additional discussion on why 231 and 375 Permacon fire suppression systems are not part of the LANL RCRA Hazardous Waste Facility Permit Contingency Plan.	LANL		Complete June 5, 2014
5.	Send copy of June 4, 2014 written daily submission to Trais Kliphuis. Also, include her on future daily submissions.	LANL		Complete June 5, 2014
6.	Provide LANL procedures and example records associated with post-1991 TA-55 cementation process discussed on June 6.	LANL		Complete July 3, 2014
7.	Provide information on numbers of containers in the post-1991 cemented waste streams from the TA-55 process discussed on June 6. This should include numbers regarding RTR status (RTR'd, meet WIPP criteria, requiring remediation).	LANL		Complete  June 17, 2014  (Supplemental Info provided July 3)
8.	Provide RTR video and pre-screening information associated with those containers requiring remediation from the post-1991 cemented waste streams from the TA-55 process discussed on June 6.	LANL		Complete July 3, 2014
9.	Provide copy of CCP/LANL Interface Document.	LANL		Complete June 9, 2014
10.	Provide a list of the analytes for which LANL is sampling HSG (CO <sub>2</sub> and LFL analytes).	LANL		Complete June 11, 2014
11.	Discuss potential sampling of HSG for NO <sub>x</sub> .	LANL		Complete June 16, 2014

12.	Follow-up with Tim Hall regarding LANL	LANL		Complete
12.	Hazardous Waste Facility Permit and procedures that LANL is developing for	LANL		Empty Parent
	possible future sampling of empty parent			June 16, 2014
	containers and unremediated nitrate salt- bearing containers at LANL.			Unremediated August 14, 2014
				(Supplemental
				information discussed on sampling of parent
				containers)
				August 26, 2014
				(Letter on applicability of LANL HWFP for
				opening waste containers)
13.	Respond to NMED email request for	LANL	In progress –	Partially Complete
	information associated with the nitrate salt-		remaining are portions	July 9, 2014 (Letter sent addressing items 1-4
	bearing parent and daughter waste containers.		of item 5	and 6-9 of the email
	WIPP Recovery Daily Meeting Action List			request) July 17, 2014 (Letter
	item #84 – NMED requested a copy of the LANL remediation records for waste stored in			sent with updated spreadsheet)
	Panel 6 (Trais Kliphuis) – is a subset of the			August 7, 2014 (First submittal in
	information in item 5 of this action.			response to item 5)
				August 14, 2014 (- Letter sent addressing
				items 2 & 8 - Second submittal in
				response to item 5)
				August 18, 2014 (Third submittal in
				response to item 5) August 21, 2014
				(Fourth submittal in
				response to item 5) August 27, 2014
				(Fifth submittal in response to item 5
				September 4, 2014 (Sixth submittal in
				response to item 5)
				September 9, 2014 (Seventh submittal in
				response to item 5) September 11, 2014
				(Eighth submittal in
				response to item 5) September 22, 2014
				(Ninth submittal in response to item 5)
14.	NMED will review the Round Sheets	NMED	NMED has reviewed	Complete
	(provided in June 11 summary) and inform LANL if these should be attachments to the		Round Sheets – no comments / direction at	June 23, 2014
	Revised Plan, or if they fall under the		this time. NMED will	
	provision in Section I of the Revised Isolation		address any comments in their formal response	
	Plan and their identification during this		to Revised Container	

	technical call is sufficient.		Isolation Plan.	
15.	NMED has requested 'copies of any waste processing, treatment, characterization stop	LANL		Complete
	orders issued since Feb 14, 2014.'			June 13, 2014 (Included w/ daily summary)
				June 16, 2014 (Discussed current TA-54 & WCRRF
16.	NMED requested information on the location	LANL		operations) Complete
10.	of drums 68327 and 68328. Request made June 14.	LANL	<del></del>	June 14, 2014
17.	Update on LANL efforts – including LANL teams. (On June 20 call, LANL offered to	LANL / NMED		Complete
	schedule an update meeting).			July 2, 2014
18.	Neutralizer use in association with container S855793 (parent of 68660 and 68685).	LANL		Complete
19.	List of nitrate calt bearing wests containers	LANL		June 25, 2014 Information will be
19.	List of nitrate salt-bearing waste containers that LANL records indicate contain absorbed	LANL		included in LANL
	liquids with the same neutralizer, as discussed			response to
	during June 25 technical call.			NMED's August 26,
20		Y A NYY /		2014 letter.
20.	Schedule follow-on update on LANL efforts – including teams.	LANL / NMED		Complete
				August 14, 2014 (Meeting held)
21.	NMED requested information on document approval / review (as discussed on July 3 call).	LANL		Complete
22.	What analyses will be conducted on samples	LANL		July 29, 2014 Complete
22.	taken from empty drums that previously contained nitrate salt-bearing waste.	E I I LE		July 7, 2014
23.	NMED requested the following information	LANL		Complete
	on cemented waste containers generated from			·
	TA-55, that are currently stored above-ground at Area G: container id number; location;			July 17, 2014 (Letter sent w/
	form (cans or monoliths); and type of			information)
	concrete. Additionally, NMED requested			, , , , , , , , , , , , , , , , , , ,
	information on pH adjustment during waste			July 18, 2014 (Meeting held)
	generation process, and information on			(wiceting neitr)
24.	anticipated pH of free liquids (and rationale).  NMED requested the procedure for sampling	LANL	EP-AREAG-WO-	Complete
	empty parent drums that previously contained	,,	DOP-1245 is	<b>F-</b>
	nitrate salt-bearing waste.		included in Enclosure	July 8, 2014
			1 to LANL's July 3,	
			2014 Response to Request for	
			Information on	
			Management of	
			Waste at LANL.	

25.	NMED requested an additional discussion on a future technical call regarding CO <sub>2</sub> ,	LANL		Complete
	including data.			August 14, 2014 (Meeting held)
26.	NMED requested additional discussion on CIN-01 waste containers and absorbent, including confirmation and extent of use.	LANL		Complete July 18, 2014 (Meeting held)
27.	NMED requested historic analytical information on pH of liquids associated with gypsum cemented waste.	LANL		Complete August 7, 2014
28.	NMED requested link to pdf of Actinide Quarterly edition (3 <sup>rd</sup> Q 2008).	LANL		Complete July 21, 2014
29.	NMED requested a copy of lessons learned	LANL		Complete August 11, 2014
30.	NMED request regarding empty drum sampling presentation.	LANL	Presentation is a pre- decisional draft/working document not for external release	August 25, 2014
31.	Respond to NMED email request dated 8/12/2014 for information associated with the nitrate salt-bearing waste containers.	LANL		Complete September 11, 2014
32.	NMED request regarding technical presentation.	LANL	Presentation is a pre- decisional draft/working document not for external release	August 25, 2014
33.	NMED request regarding literature review of catalytic reactions.	LANL	Literature review is a pre-decisional draft/working document not for external release	August 25, 2014
34.	LANL requested to schedule a meeting with NMED on remediation planning and schedules.	LANL / NMED	In progress	
35.	Schedule a third update on LANL efforts – including teams.	LANL / NMED	In progress	
36.	NMED request regarding LANL Causal Analysis associated with processing of nitrate salt-bearing waste at WCRRF – when document is Final.	LANL	Document is currently Draft.	
37.	NMED requested a diagram illustrating the current locations within the 375 Permacon of the 55 SWBs that contain the 57 remediated nitrate salt-bearing waste containers. NMED also requested a list of these 55 SWBs and the waste drums within each SWB (including the container numbers and waste stream type).	LANL	In progress	

Next Call: Tuesday, September 25, 2014

# Remediated Nitrate Salt Container Headspace Gas Analysis

09/23/14	Date	
136	H <sub>2</sub> ppm	
1112	CO ppm	68685
24541	CO <sub>2</sub> ppm	i85
7906	N <sub>2</sub> O ppm	
8169	H <sub>2</sub> ppm CO ppm CO <sub>2</sub> ppm N <sub>2</sub> O ppm H <sub>2</sub> ppm CO ppm CO <sub>2</sub> ppm N <sub>2</sub> O ppm H <sub>2</sub> ppm CO ppm CO <sub>2</sub> ppm N <sub>2</sub> O ppm H <sub>2</sub> ppm CO ppm CO <sub>2</sub> ppm N <sub>2</sub> O ppm CO <sub>2</sub> ppm N <sub>2</sub> O ppm H <sub>2</sub> ppm CO ppm CO <sub>2</sub> ppm N <sub>2</sub> O ppm H <sub>2</sub> ppm CO ppm CO ppm CO ppm N <sub>2</sub> O	
518	CO ppm	SB50522
61908	CO <sub>2</sub> ppm	)522
1068	N <sub>2</sub> O ppm	
379	H <sub>2</sub> ppm	
626	CO ppm	69630
14369	CO <sub>2</sub> ppm	30
841	N <sub>2</sub> O ppm	
400	H <sub>2</sub> ppm	
354	CO ppm	69633
6284	CO <sub>2</sub> ppm	33
1116	N <sub>2</sub> O ppm	
189	H <sub>2</sub> ppm	
236	CO ppm	69635
4696	CO ppm CO <sub>2</sub> ppm N <sub>2</sub> O ppm	35
141	N <sub>2</sub> O ppm	

# Remediated Nitrate Salt Container Headspace Gas Analysis

09/23/14	Date	
117	H <sub>2</sub> ppm	
312	CO ppm	69637
2963	CO <sub>2</sub> ppm	637
629	N <sub>2</sub> O ppm	
522	H <sub>2</sub> ppm	
537	H <sub>2</sub> ppm CO ppm CO <sub>2</sub> ppm N <sub>2</sub> O ppm H <sub>2</sub> ppm CO ppm CO <sub>2</sub> ppm N <sub>2</sub> O ppm CO <sub>2</sub> ppm CO <sub>2</sub> ppm N <sub>2</sub> O ppm H <sub>2</sub> ppm CO ppm CO <sub>2</sub> ppm CO <sub>2</sub> ppm N <sub>2</sub> O ppm CO <sub>2</sub> ppm CO <sub>2</sub> ppm N <sub>2</sub> O ppm H <sub>2</sub> pp	69638
9028	CO <sub>2</sub> ppm	38
631	N <sub>2</sub> O ppm	
71	H <sub>2</sub> ppm	
55	CO ppm	69642
2471	CO <sub>2</sub> ppm	542
170	N <sub>2</sub> O ppm	
227	H <sub>2</sub> ppm	
437	CO ppm	69644
9808	CO <sub>2</sub> ppm	544
2434	N <sub>2</sub> O ppm	
737	H <sub>2</sub> ppm	
958	CO ppm	SB50443
13731	CO ppm CO <sub>2</sub> ppm N <sub>2</sub> O ppm	)443
2015	N <sub>2</sub> O ppm	

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# TA-54 AREA G TA-54-231 NITRATE SALT TRU WASTE CONTAINER DAILY TEMPERATURE DATA SHEET

6.[6] Date: From 9-22-14 to 9-28-14

			S816434	S804995	69907	S802739	S822713	S813545	S793724	S825879	S822844	70069	S816810	S801676	S802833	S818435	Container ID #	Ambient Temperature (6.[9])	(6.[7])	Calibrated Infrared	TA-54-231			
	881411 #Z	WORK	66.0	65.6	65.6	65.60	65.5	64.7	64.8	64.7	0.59	8.49	64.8	65.6	66.1	65.7	Temp (°F) (6.[10]/6.[11])	65.3 °F	Cal. Due Date: 7-29-15 File Number 101974	Brand: Fluke		Start Time: 0833	6.[6]	Monday
^ '	1188	WORKING COPY															Temp (°F) (6.[10]/6.[11])		Model: Cal. Due Date: File Number	Brand:		Start Time:	6.[6]	Tuesday
																	Temp (°F) (6.[10]/6.[11])	0 4	Model:  Cal. Due Date:  File Number	Brand:		Start Time:	6.[6]	Wednesday
																	Temp (°F) (6.[10]/6.[11])	0	Model: Cal. Due Date: File Number	Brand:		Start Time:	6.[6]	Thursday
																	Temp (°F) (6.[10]/6.[11])	o F	Model: Cal. Due Date: File Number	Brand:		Start Time:	6.[6]	Friday
																	Temp (°F) (6.[10]/6.[11])	-Fo	Model: Cal. Due Date: File Number	Brand:		Start Time:	6.[6]	Caturday
																	Temp (°F) (6.[10]/6.[11])	٦٠ - ا	Model:  Cal. Due Date:  File Number	Brand:		Start Time:	6.[6]	Cunday

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6.[6] Date: From 9.22.14 to 9.28.14

6.[15]	End Time (6.[15])	Ambient Temperature (6.[14])	S842446	S813385	S804948	S823124	S825878	S803078	S853714	S864213	S805051	69904	S822599	S823184	70072	S862888	S805289	TA-54-231 (continued)	Container ID #	
Operator: JR Operator: £C	1480	66.5°F	66.5	66.0	66.0	65.2	65.2	64.9	65.0	65.2	65.0	65.2	65.7	65.9	65.7	65.9	65.7		Temp (°F) (6.[10]/6.[11])	Monday
Operator:		To T																	Temp (°F) (6.[10]/6.[11])	Tuesday
Operator:		- I-o																	Temp (°F) (6.[10]/6.[11])	Wednesday
Operator:		o F																	Temp (°F) (6.[10]/6.[11])	Thursday
Operator:		-Fo																	Temp (°F) (6.[10]/6.[11])	Friday
Operator:Operator:		-Fo																No. of the last of	Temp (°F) (6.[10]/6.[11])	Saturday
Operator:		oF.																	Temp (°F) (6.[10]/6.[11])	Sunday

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6.[6] Date: From 9.22.14 to 9.28.19

o.[z] Comments:									
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8.1[2] Reviewed by:									
SOM or designee (print)	Signature	Z#	Initials	Date					

Initials Date

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# TA-54 AREA G TA-54-375 CELL 1 NITRATE SALT TRU WASTE CONTAINER DAILY TEMPERATURE DATA SHEET

6.[6] Date: From 9.22.14 to 9.28.14

69417	69616	69636	LASB50073	LASB50069	LASB50431	LASB50452	LASB50522	69013	69618	69445	68553	68540	68685	Container ID #	Ambient Temperature (6.[9])	(6.[7])	Calibrated Infrared Thermometer	TA-54-375 Cell 1			
61.8	61,2	61.4	62.4	62.0	61.3	61.9	61.8	61.8	62.0	6a. a	62.2	61.8	61.7	Temp (°F) (6.[10]/6.[11])	62.6°F	Cal. Due Date: 6/7/5 File Number 101915	Brand: Flute  Model: 5%		Start Lines Of Sk	Start Time: >72/	Monday
														Temp (°F) (6.[10]/6.[11])	0	Cal. Due Date: File Number	Brand:  Model:		Start Time.	Ctart Time:	Tuesday
														Temp (°F) (6.[10]/6.[11])	J.	Cal. Due Date: File Number	Brand: Model:		Start Time:	0.[0]	Wednesday
														Temp (°F) (6.[10]/6.[11])	J.	Cal. Due Date:File Number	Brand:		Start Time:	0.[6]	Thursday
														Temp (°F) (6.[10]/6.[11])	oF	Cal. Due Date:	Brand:		Start Time:	6.[6]	Friday
														Temp (°F) (6.[10]/6.[11])	ч	Cal. Due Date: File Number	Brand:		Start Time:	6.[6]	Saturday
														Temp (°F) (6.[10]/6.[11])	Τo	Cal. Due Date: File Number	Brand:		Start Time:	6.[6]	Sunday

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6.[6] Date: From 9.22/4 to 9.28/14

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Container ID #	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)
	(6.[10]/6.[11])	(6.[10]/6.[11])	(6.[10]/6.[11])	(6.[10]/6.[11])	(6.[10]/6.[11])	(6.[10]/6.[11])	(6.[10]/6.[11])
TA-54-375 Cell 1 (continued)	inued)				7 L 1 L 1	V=-1111	(0.1.0), 0.1.1)
69620	61.5						
69520	62.6						
69641	62.0						
69298	61.8						
LASB02203	61.5						
Ambient Temperature (6.[14])	62 C °F	o Fi	-F	η	H <sub>o</sub>	- F	о П
End Time (6.[15])	opto						
6.[15]	Operator: 8c	Operator:	Operator:	Operator:	Operator:	Operator:	Operator
	Operator: JR	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:
6.[15]	6.[15] Operator: \( \frac{\xeta_c}{\text{JK}} \)	Operator:	Operator:Operator:	Operator:	Operator:	Operator:	Operator:

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6.[6] Date: From 9.22.14 to 9.28.14

8.1[2] Reviewed by: 6.[19] Performed by: Operator (print)

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SOM or designee (print)

Signature

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Signature	Signature	Signature	Signature	Signature	Signature	/ Signature
Z#	Z#	Z#	Z#	Z#	Z#	Z#
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# TA-54 AREA G TA-54-375 CELL 2 NITRATE SALT TRU WASTE CONTAINER DAILY TEMPERATURE DATA SHEET

6.[6] Date: From 9.22.14 to 9.28.14

69638	LASB50443	69644	LASB50442	94227	68567	69634	68631	68430	69633	69630	69642	69635	69615	68638	LASB02198	Container ID #	Ambient Temperature (6.[9])	(6.[7])	Calibrated Infrared Thermometer	TA-54-375 Cell 2			
(02.1	62.0	62.1	62.0	61.6	61.1	61.0	61.3	101.7	62.0	61.7	61.7	62.3	101.4	61.1	61.	Temp (°F) (6.[10]/6.[11])	61.8 °F	Cal. Due Date:6-12-15 File Number 101912	Brand: Fluke Model: 561		Start Time: 0859	6.[6]	Monday
																Temp (°F) (6.[10]/6.[11])	oF	Cal. Due Date: File Number	Brand:		Start Time:	6.[6]	Tuesday
																Temp (°F) (6.[10]/6.[11])	o F	Cal. Due Date: File Number	Brand:		Start Time:	6.[6]	Wednesday
																Temp (°F) (6.[10]/6.[11])	Jo.	Cal. Due Date: File Number	Brand:		Start Time:	6.[6]	Thursday
																Temp (°F) (6.[10]/6.[11])	٥F	Cal. Due Date: File Number	Brand:		Start Time:	6.[6]	Fridav
																Temp (°F) (6.[10]/6.[11])	्म	Cal. Due Date: File Number	Brand:		Start Time:	6.[6]	Saturday
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6.[6] Date: From 9.22.14 to 9.28.14

ı	_			_	_	_	ı								
6.[2] Comments:	6.1.2	_	Ambient Temperature (6.[14])	69637	69639	69015	LASB50559	69598	69553	69568	68507	68624	TA-54-375 Cell 2 (continued)	Container ID #	
	Operator: &C	0906	61.9 °F	62.2	62.5	62.2	61.9	61.2	61.7	(01.4	62.2	61.9	tinued)	Temp (°F) (6.[10]/6.[11])	Monday
	Operator:	Opposit	oF.											Temp (°F) (6.[10]/6.[11])	Tuesday
	Operator:		oF											Temp (°F) (6.[10]/6.[11])	Wednesday
	Operator:		- P											Temp (°F) (6.[10]/6.[11])	Thursday
	Operator:													Temp (°F) (6.[10]/6.[11])	Friday
	Operator:		0											Temp (°F) (6.[10]/6.[11])	Saturday
	Operator:		, i											Temp (°F) (6.[10]/6.[11])	Sunday

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6.[6] Date: From 9.22.14 to 9.28.14

6.[19] Performed by: Operator (print) Operator (print) Operator (print) Operator (print) Operator (print)

Eloy D. Colduna / Operator (print) Signature Signature Signature Signature Signature Komene 187066 JR 19-22-19

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Operator (print)		Operator (print)		Operator (print)		Operator (print)		Operator (print)		Operator (print)		Operator (print)	
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## 8.1[2] Reviewed by:

Operator (print)

Signature

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SOM or designee (print)	
Signature	
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Date	_

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# TA-54 AREA G TA-54-375 CELL 3 NITRATE SALT TRU WASTE CONTAINER DAILY TEMPERATÜRE DATA SHEET

6.[6] Date: From 9.22.14 to 9.28.14

	6.[15]	End Time (6.[15])	Ambient Temperature (6.[14])	LASB50448	69559	LASB50451	69036	LASB50418	LASB50529	69604	69548	93605	94068	69645	69519	Container ID#	Ambient Temperature (6.[9])	(6.[7])	Calibrated Infrared Thermometer	TA-54-375 Cell 3		
	Operator: >< Operator: JR	0734	63.3 °F	63.7	63.4	63.2	63.0	63.4	63.2	63.0	63.2	63.6	63.0	62.8	62.9	Temp (°F) (6.[10]/6.[11])	63.1 °F	Cal. Due Date: 6/2/5 File Number 10/5/6	Brand: Fluke Model: 57		Start Time: 073/	Monday 6.[6]
WO.	Operator:		O.T.					-								Temp (°F) (6.[10]/6.[11])	цо	Cal. Due Date: File Number	Brand:		Start Time:	Tuesday 6.[6]
WORKING SOLI	Operator:Operator:		O													Temp (°F) (6.[10]/6.[11])	o F	Cal. Due Date: File Number	Brand:		Start Time:	Wednesday 6.[6]
	Operator: Operator:		0													Temp (°F) (6.[10]/6.[11])	o Ti	Cal. Due Date: File Number	Brand:		Start Time:	Thursday 6.[6]
	Operator:		o Fi												F 1.	Temp (°F) (6:[10]/6:[11])	0.17	Cal. Due Date: File Number	Brand:		Start Time:	Friday 6.[6]
	Operator:		J.o												/[][]/	Temp (°F) (6.[10]/6.[11])	°F	Model: Cal. Due Date: File Number	Brand:		Start Time:	Saturday 6.[6]
	Operator:Operator:		J.												(0.1.0],0.1.1.1)	Temp (°F)	0 7	Model:Cal. Due Date:	Brand:		Start Time:	Sunday 6 [6]

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6.[6] Date: From 9.22./4 to 9.28//4
6.[2] Comments:

Operator (print) Signature		Operator (print) Signature		Operator (print) Signature		Operator (print) Signature		Operator (print) Signature		Operator (print) \$\mathscr{A}\mat	Jacke Komers / Haufer	Operator (print) Signature	E1073612 4 1200 CC
Z#	_	Z#		Z#		Z#		Z#		Z#	Komus /18704	Z#	111418
Initials	\	Initials	_	Initials	_	Initials	_	Initials	_	Initials Date	1870661 JR	Initials	114188 180
Date	_	Date		Date		Date	\	Date	_	Date '	19-22-14	Date	18.22.14

6.[19] Performed by:

8.1[2] Reviewed by:

SOM or designee (print)

Signature

Z#

Initials Date

Operator (print)		Operator (print)		Operator (print)		Operator (print)		Operator (print)		Operator (print)		Operator (print)	
Signature	_	Signature											
Z#	_	Z#		Z#		Z#		Z#	_	Z#		Z#	
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TA-54 AREA G NITRATE SALT TRU WASTE CONTAINER HOURLY TEMPERATURE DATA SHEET

6.[6] Date: From 9.2214 to 9.2214

Location: Done 375 call 1

		(6.[10]/6.[11]) 6.5695 50532	Ambient Temperature (6.[9])	Infrared Thermometer (6.[7])	Calibrated
		Temp (°F) (6.[10]/6.[11]) 62. 7	63.4.	Model:  Soll  Cal. Due Date:  617-15	Start Time: 6.[6]
		Temp (°F) (6.[10]/6.[11]) 61.9	63.0 %	Model: St. Due Date: Cal. Due Date:	Start Time: 6.[6]
		Temp (°F) (6.[10]/6.[11]) 61. 3	101415	14	Start Time: 6.[6]
		Temp (°F) (6.[10]/6.[11]) C	53.5 of	Model:  Cal. Due Date:  Cal. Ty.	Start Time: 6.[6]
WORKING COPY		Temp (°F) (6.[10]/6.[11]) 62.3 62.4	File Number 101415	9"	Start Time: 6.[6]
S COPY	-	Temp (°F) (6.[10]/6.[11]) 63.6	64.5°F		Start Time: 6.[6]
7		Temp (°F) (6.[10]/6.[11]) 67.3		Model:  Cal. Due Date:	Start Time: 6.[6]
DATE 9. 2.7.19		Temp (°F) (6.[10]/6.[11]) 62.0			Start Time: 6.[6]
		Temp (°F) (6.[10]/6.[11])			Start Time: 6.[6]
		Temp (°F) (6.[10]/6.[11]) 68.4			Start Time: 6.[6]
		Temp (°F) (6.[10]/6.[11]) (83.5		Model: Cal. Due Date:	Start Time: 6.[6]
_		+		Model: No Paris:	Start Time: 6.[6]
		Temp(°F) (6.[10]/6.[11])		Bhind: Mocel: Cal. Die Date:	Start Time: 6.[6]
		Temp (°F) [6.[10]/6.[11])	File Number	Brand:  Model:  Cal. Due Date:	Start Time: 6.[6]

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6.[6] Date: From 9.2214 to 9.2214

# Nitrate Salt-Bearing TRU Waste Container Monitoring

Location: Dow 375 Cell 1 Page 2 of 3

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Ambient Temperature (6.[14]) End Time (6.[15])	Container ID # (6.[10]/6.[11])
63.5 op Operator	Temp (°F) (6.[10]/6.[11])
Operator:	Temp (°F) (6.[10]/6.[11])
Operator: Operat	Temp (°F) ]) (6.[10]/6.[11])
Operator: Operat	Temp (°F) (6.[10]/6.[11])
63.74: Operation:	Temp (°F) (6.[10]/6.[11])
Operator Operator	Temp (°F) (6.[10]/6.[11])
Operandi:	Temp (°F) (6.[10]/6.[11])
Spermiti: Spermiti:	Temp (°F) (6.[10]/6.[11])
Operation Operation	Temp (°F) (6.[10]/6.[11])
Cornor Cornor	Temp (°F) (6.[10]/6.[11])
Openior: Constitution of the second of the s	Temp (°F) (6.[10]/6.[11])
Operator:	Temp (°F) (6.[10]/6.[11])
Operator:	Temp (°F) (6.[11])
operator: Operator:	Temp (°F) (6.[10]/6.[11])

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6.[6] Date: From 9.22.14 to 9.22.14 Location: Den 375 Call 1

6.[2] Comments: MOWC

8. Reviewed by Row or designee (print)	Operator (print)	Operator (print)	Operator (print)	Operator (print)	Operator (print)	Operator (print)	Operator (print)	6.[19] Performed by:
Signature	Signature	Signature	Signature	Signature	Signature	Stenature	Signature	
7001 19 9-22 14	Z# Initials Date	ZII Initials Date	Initials Date	Z# Initials Date	Da	Initials Date	1	o husman a m
	Operator (print)	Operator (print)	Operator (print)	Operator (print)	Operator (print)	Operator (print)	Operator (print)	
	Signature	Signature	Signature	Signature	Signature	Signature	Signature	
	Z# 1	/ HZ	ZH /	ZIII	7.#	7.11	HZ	
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# TA-54 AREA G NITRATE SALT TRU WASTE CONTAINER HOURLY TEMPERATURE DATA SHEET

6.[6] Date: From 9-22-14 to 9-23-14 Location: 375 CEUMI

	506 700	58989	Container ID # (6.[10]/6.[11])	Temperature (6.[9])	(6.[7])	Calibrated Infrared Thermometer	
	6.7	68,2	Temp (°F) (6.[10]/6.[11])	68.5 °F	Cal. Due Date:	Fluces Model:	Start Time: 6.[6]
	8.59	66.7	Temp (°F) (6.[10]/6.[11])	67,1 °F	Cal. Due Date:	Brand: FLMKA Model:	Start Time: 6.[6]
	6%9	65.8	Temp (°F) (6.[10]/6.[11])	66.0 of	Cal. Due Date:	Brand: Fluke Model:	Start Time: 6.[6]
	64.7	65.0	Temp (°F) (6.[10]/6.[11])	65.2 °F	Cal. Due Date: 6-12-cs File Number	Brand: Fluks Model:	Start Time: 6.[6]
A	8.5	6.59	Temp (°F) (6.[10]/6.[11])	69.4 of	Cal. Due Date:	Brand:	Start Time: 6.[6]
	62.6	63.0	Temp (°F) (6.[10]/6.[11])	63.4 °F	Cal Due Date: 6 72-75 File Number 1019-75	Brand: FUNE Model:	Start Time: 6.[6]
	61.9	61.6	Temp (°F) (6.[10]/6.[11])	62.4°F	Cal. Due Date:  Cal. With Die Date:  Cal. Due	Brand:	Start Time: 6.[6]
	62.0	62.2	Temp (°F) (6.[10]/6.[11])	62.9°F	Cal. Due Date 67275 File Number	Brand:  -W. L. Model:	Start Time: 6.[6]
	61.5	61.0	Temp (°F) (6.[10]/6.[11])	61.600	Cal Due Date:	Brand: J-Lull Model:	Start Time: 6.[6]
	61.2	8.09	Temp (°F)	6/3°F	Cal Due Date:	Brand:  = Units Model:	Start Time: 6.[6]
	61.3	8.0%	Temp (°F)	61.5°F	Cal. Due Date:	_ '	Start Time: 6.[6]
	61.4	5,19	Temp (°F)	61.5 %	Cal. Due Date	Brand: FRANK Model:	Start Time: 6.[6]
		(0)	Temp(°F)	Ę,	Cal. Due Date:	Brand: Model:	Start Time: 6.[6]
		(0,[14])0,[11])	Temp (°F)	·jo	Cal. Due Date: File Number	Bland:	Start Time: 6.[6]

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# Nitrate Salt-Bearing TRU Waste Container Monitoring

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6.[6] Date: From 97274 to 9-2374 Location: 375 CENE

6.[15]	End Time (6.[15])	Temperature (6.[14])								3			(6.[10]/6.[11])
Operator: Operator:	1834	628 of											# Temp (°F) ) (6.[10]/6.[11])
Operator: Operator	1934	671°F											Temp (°F) (6.[10]/6.[11])
Operator: Operator: Operator:	2031	de / oF											Temp (°F) (6.[10]/6.[11])
Operator: Operator:	2132	65,4°F											Temp (°F) (6.[10]/6.[11])
Operator: Operator:	2231	4° 6° 6° oF					~						Temp (°F) (6.[10]/6.[11])
Operator: Operator:	2331	63.3°F					/	#					Temp (°F) (6.[10]/6.[11])
Operator:	0030	62.3°F						1					Temp (°F) (6.[10]/6.[11])
Operator: Operator:	0131	62.8°F							\				Temp (°F) (6.[10]/6.[11])
Operator: Operator:	0230	62.0°F											Temp (°F) (6.[10]/6.[11])
Operator: Operator:	0330	61.4°F											Temp (°F) (6.[10]/6.[11])
Operator: Operator:	1840	619°F											Temp (°F)
Operator:	0531	6/8 %											Temp (°F)
Operator: Operator:			1	1	· /					_		32	Temp (°F)
Operator: Operator:		0			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	. / &							Temp (°F)

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8.1[2] Reviewed by:

Som or designee (print)

Som or designee (print)

Signature 2# Initials Date