From: Vigil-Holterman, Luciana R Sent: Friday, October 03, 2014 3:54 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; coleman.smith@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; Torres, Enrique; Woitte, Deborah Kay; Clemmons, Steve; Allen, Don; Roberts, Kathryn Margaret; Brandt, Michael Thomas; Sharp-Geiger, Raeanna Racine; Dorries, Alison Marie; Grieggs, Tony; Bacigalupa, Gian A; 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; Beard, Carl Allen; Cabbil, Cheryl Denise; Young, Steven L; Erickson, Randy; Funk, David John; Alexander, Rick A; Haagenstad, Mark P Subject: Daily Technical Submission - October 3, 2014

Attached is the written daily technical submission for today. The Permittees are submitting the attached information 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 Mark if additional information would be helpful. Thank you.

Luciana Vigil-Holterman for 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

October 3, 2014

LANL Technical Update:

- Location of Nitrate Salt-Bearing Wastes
 - Remediated nitrate salt-bearing waste containers.
 - All containers remain in the 375 Permacon.
 - Unremediated nitrate salt-bearing waste containers.
 - All containers remain in the 231 Permacon.
- Monitoring Daily Temperature
 - Temperatures remain below 90°F.
 - Previous day's daily temperature data attached.

• Monitoring – Visual Inspections

• No abnormal conditions were observed.

• Monitoring – headspace gas (HSG)

- o Containers (SWBs) 68685 and SB50522.
 - Continue daily head space gas (HSG) sample collection.
 - October 2 and 3, 2014 HSG data attached
 - \circ H₂, CO, CO₂ and N₂O

o Other containers

- A minimum of once per month HSG sampling will be conducted.
 - To date in October, LANL has conducted HSG sampling on 17 SWBs. HSG sampling was conducted on 5 additional SWBs today.
 - Note: LANL previously conducted HSG sampling on each of the 55 SWBs that contain 55-gallon drums of remediated nitrate saltbearing 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.
 - LANL continuing solid phase micro-extraction.
 - Hourly temperature measurements are currently on hold due to pause discussed in notes for October 2, 2014.
 - Five (5) other SWB overpacks (containing 55-gallon drums of remediated nitrate salt-bearing waste).
 - Continue twice-weekly HSG sample collection.

- Anticipated Changes to Nitrate Salt-Bearing Waste Containers (e.g. movement, repackaging).
 - Currently, no further movements or re-packaging are planned.
- Other:

	Requested Information	Actionee	Status	Completion
				Date
1.	NMED contact / process for LANL to notify NMED under the Revised Isolation Plan (e.g., 24 hour notices).	NMED		Complete June 5, 2014
2.	Keep NMED informed on the status of on- going 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_2 and LFL analytes).	LANL		Complete June 11, 2014
11.	Discuss potential sampling of HSG for NO _x .	LANL		Complete

Summary Chart - Requested Information / Pending Issues:

June 16, 2014

	Requested Information	Actionee	Status	Completion Date
12.	Follow-up with Tim Hall regarding LANL Hazardous Waste Facility Permit and procedures that LANL is developing for possible future sampling of empty parent containers and unremediated nitrate salt- bearing containers at LANL.	LANL		Complete Empty Parent June 16, 2014 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)

	Requested Information	Actionee	Status	Completion
				Date
13.	Respond to NMED email request for information associated with the nitrate salt- bearing parent and daughter waste containers. WIPP Recovery Daily Meeting Action List item #84 – NMED requested a copy of the LANL remediation records for waste stored in Panel 6 (Trais Kliphuis) – is a subset of the information in item 5 of this action.	LANL	In progress – remaining are portions of item 5	Partially Complete July 9, 2014 (Letter sent addressing items 1-4 and 6-9 of the email request) July 17, 2014 (Letter sent with updated spreadsheet) August 7, 2014 (First submittal in response to item 5) August 14, 2014 (Letter 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 (Fourth 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 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) September 23, 2014 (Tenth submittal in response to item 5) September 23, 2014 (Tenth submittal in response to item 5) October 1, 2014 (Eleventh submittal in response to item 5)
14.	NMED will review the Round Sheets (provided in June 11 summary) and inform LANL if these should be attachments to the Revised Plan, or if they fall under the provision in Section I of the Revised Isolation Plan and their identification during this technical call is sufficient.	NMED	NMED has reviewed Round Sheets – no comments / direction at this time. NMED will address any comments in their formal response to Revised Container Isolation Plan.	Complete June 23, 2014

	Requested Information	Actionee	Status	Completion
				Date
15.	NMED has requested 'copies of any waste processing, treatment, characterization stop orders issued since Feb 14, 2014.'	LANL		Complete June 13, 2014 (Included w/ daily summary) June 16, 2014 (Discussed current TA-54 & WCRRF operations)
16.	NMED requested information on the location of drums 68327 and 68328. Request made June 14.	LANL		Complete June 14, 2014
17.	Update on LANL efforts – including LANL teams. (On June 20 call, LANL offered to schedule an update meeting).	LANL / NMED		Complete July 2, 2014
18.	Neutralizer use in association with container S855793 (parent of 68660 and 68685).	LANL		Complete June 25, 2014
19.	List of nitrate salt-bearing waste containers that LANL records indicate contain absorbed liquids with the same neutralizer, as discussed during June 25 technical call.	LANL		Complete September 30, 2014 (with August 26, 2014 response)
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 July 29, 2014
22.	What analyses will be conducted on samples taken from empty drums that previously contained nitrate salt-bearing waste.	LANL		Complete July 7, 2014
23.	NMED requested the following information on cemented waste containers generated from TA-55, that are currently stored above-ground at Area G: container id number; location; form (cans or monoliths); and type of concrete. Additionally, NMED requested information on pH adjustment during waste generation process, and information on anticipated pH of free liquids (and rationale).	LANL		Complete July 17, 2014 (Letter sent w/ information) July 18, 2014 (Meeting held)

	Requested Information	Actionee	Status	Completion Date
24.	NMED requested the procedure for sampling empty parent drums that previously contained nitrate salt-bearing waste.	LANL	EP-AREAG-WO-DOP- 1245 is included in Enclosure 1 to LANL's July 3, 2014 Response to Request for Information on Management of Waste at LANL.	Complete July 8, 2014
25.	NMED requested an additional discussion on a future technical call regarding CO ₂ , including data.	LANL		Complete 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 rd 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 Meeting scheduled for Monday September 29th	Complete September 29, 2014 (meeting held)
35.	Schedule a third update on LANL efforts – including teams.	LANL / NMED	In progress.Currently scheduled for October 20, 2014	

	Requested Information	Actionee	Status	Completion Date
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	
38	NMED requested documentation regarding CIN01.001 waste containers that are not part of the September 19, 2014 Nitrate Salts- Bearing Waste Container Isolation Plan, Revision 2.	LANL	In Progress LANL anticipates submitting the first 100 out of 586 RTRs and documentation by Friday October 3, 2014	

Next Call: Tuesday October 7, 2014

Remediated Nitrate Salt Container Headspace Gas Analysis

		680	685			69553			69615				69616				SB50069			
Date	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm
10/02/14	115	883	18350	5719	140	650	21375	3170	68	177	5365	269	229	927	24564	5429	61	594	15760	2585
10/03/14	134	1071	22713	7024																

Remediated Nitrate Salt Container Headspace Gas Analysis

		SB50	0452			SB5	0522			680	624			690	633			690	635	
Date	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm
10/02/14	41	330	10568	2054	7264	481	57066	1020												
10/03/14					7210	495	58419	1041	40	116	1598	239	323	409	5641	998	174	175	4634	203

		690	639		69644				
Date	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	
10/02/14									
10/03/14	161	216	9851	292	210	410	8617	2160	

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ATTACHMENT 2

Page 1 of 3

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

6.[6] Date: From <u>D9/29/14</u> to <u>10/05/14</u>

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6] Start Time: 0950	6.[6] Start Time: <u>0943</u>	6.[6]	09196.[6]	6.[6]	6.[6]	6.[6]
	start rime: 0150	Start Time: 0975	Start Time: <u>1120</u>	Start Time: 1306	Start Time:	Start Time:	Start Time:
TA-54-231	F1. 40		le	Flake or	N		
Calibrated Infrared Thermometer	Brand: Fluce	Brand: Fluit	Brand: Pluy	Fluke with	Brand:	Brand:	Brand:
	Model: 50 Cal. Due Date: 729/15	Model: 50	Model: 20 Cal. Due Date: 2915	Model Stat Nor	Model:	Model:	Model:
(6.[7])	File Number	Cal. Due Date: 7/29/15 File Number /0974	File Number 10979	Cal. Due Date: 07/74/5	Cal. Due Date:	Cal. Due Date:	
Ambient Temperature			File Number Loter F	File Number 10 974	File Number	File Number	File Number
(6.[9])	63.6°F	54.9 °F	<u>(02-9</u> °F	54.4_°F	°F	°F	°F
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])
S818435	63.2	58.6	62.9	53.6			
S802833	63.0	56.3	621	54.8			
S801676	42.9	55.7	6.6	53.9-54.7			
S816810	62.6	55.5	62.0	P# 52 9-53 8			
70069	62.2	54.3	61.2	64527534			
S822844	10Z.8	54.8	(01.8	P. 1.53.6 53.7			
S825879	62.7	53.9	62.5	53.6 53.6			
S793724	62.6	55.	62.2	81, 33.5536			
S813545	62.4	55.7	61.1	54.7535			
S822713	(03.)	56.8	629	54.654.7			
S802739	63.2	53.9	Lez.y	6- 34.8 54.6			
69907	62.9	54.2	4.8	54.8			
S804995	(03.0	_56.1	(a 1 .7	54.4			
S816434	103.2	57.0	63.3	56.1			

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INITIAL WM DATE 9-29-14

Nitrate Salt-Bearing TRU Waste Container Monitoring

ATTACHMENT 2 Page 2 of 3

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Container 1D #	Temp (°F) (6.[10]/6.[11])						
FA-54-231 (continued	1)						
S805289	63.5	57.0	63.4	55.9			1
S862888	(03.0	56.3	62.8	55.1			
70072	62.9	55.8	62.5	55.0			
S823184	103.3	54.8	634	55.			
S822599	(03.]	56.4	629	54.9			
69904	67.5	55.3	61.8	53.4			
S805051	62.4	54.7	61.7	53.4			
S864213	62.5	54.9	LeZ.1	53.6			
S853714	62.8	55.8	62.6	535			
S803078	63.0	55.5	635	53.7			
S825878	62.9	55.8	102.7	54.0			
S823124	63.0	56.1	1028	54.3			
S804948	63.2	57.5	102.6	55:2			
S813385	(03.4	56.6	103.9	55.8			
S842446	(03.7	57.3	64,2	56.8			
mbient Temperature .[14])	63.9°F	57.8 °F	63.6 °F	54.4°F	°F	°F	°F
nd Time (6.[15])	0959	1955 .	1129	0929			
6.[15]	Operator:	Operator:	Operator: /	Operator:	Operator:	Operator:	Operator:
r1	Operator:						

()	Nitrate Salt-Bearing TRU Waste Container Monitoring	Document No.: Revision:	EWMO-AREAG-FO 4	-1246
		Effective Date:	9-11-2014	
UET		Page:	26 of 37	

ATTACHMENT 2 Page 3 of 3

6.[6] Date: From <u>09/29/14</u> to <u>10/05/14</u>

6.[2] Comments: _____

6.[19] Performed by: <u>Isophune Duran</u> Operator (print) Ultimo View (151971) Signature Z# Initials Date (151971) Z# Initials Date
Operator (print) Signature Z# Initials Date
Absidine Quan 200 1/5797/1 10/ 19/20/14
Operator (print) / Signature / Z# Initials Date
Alfreda Aquilar 1 Att tamber 1 23/81 1 19/39/14
Operator (print) Signature Z# Initials Date
Isephine Duran, Set 151971 M 18/01/14
Operator (print) Signature Z# Mitials Date
170M25 MOLL -VT 12363871 + 110/1 N
Operator (print) Signature Z# Initials Date
THOMAS VIGTLI TO VZ' 1243821 + 10/2/14
Operator (print) Signature Z# Initials Date
8.1[2] Reviewed by:

Issephinet	Wran E	11579	71100	10/2/14
Operator (print)	Signature	Z#	Initials	Date
	/	/	/	/
Operator (print)	Signature	Z#	Initials	Date
	/	/	/	/
Operator (print)	Signature	Z#	Initials	Date
	/	1	1	/
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



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ATTACHMENT 3

Page 1 of 3

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

6.[6] Date: From <u>9-29-14</u> to <u>9-29-14</u> wo

	Monday 6.[6]	Tuesday 6.[6]	Wednesday 6.[6]	Thursday 6.[6]	Friday 6.[6]	Saturday 6.[6]	Sunday
	Start Time: 10:45	Start Time: 12-25	Start Time: 1301	Start Time: <u>163</u>	Start Time:	Start Time:	6.[6] Start Time:
TA-54-375 Cell 1							
Calibrated Infrared Thermometer (6.[7])	Brand: <u>5/6/65</u> Model: <u>561</u> Cal. Due Date: <u>612/5</u> File Number <u>10/9/6</u>	Brand: Pluke Model: <u>561</u> Cal. Due Date: <u>6-12-15</u> File Number <u>101915</u>	Brand: Fluce Model: 561 Cal. Due Date: 62-15 File Number 101915	Brand: Model: Cal. Due Date: File Number			
Ambient Temperature (6.[9])	<u>64.7</u> °F	65.3 °F	66.0°F	GIL oF	°F	°F	°F
Container ID #	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
68685	63.8	63.9	65.7	61.4			
68540	64.9	63.8	65.3	61.8			
68553	65.0	63.5	65.9	61.7	· · · · · · · · · · · · · · · · · · ·		
69445	64.3	69.9	66.3	61.5			
69618	64.4	64.0	65.5	5.73			
69013	69.0	63.5	65.2	61.0			
LASB50522	63.9	63.8	65.1	61.4			
LASB50452	64.0	63.8	65.3	41.3			
LASB50431	67.7	63.5	64.2	61.2			
LASB50069	63.9	63.4	64.9	61.3			
LASB50073	64.0	64.3	64.9	61.7			
69636	63.6	63.1	64.5	61.2			
69616	63.3	63.1	645	61.6			
69417	67.0	63.6	65.1	61.8			

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Z# 219908 INITIAL W m DATE 9-29-14



ATTACHMENT 3 Page 2 of 3

6.[6] Date: From <u>9-29-14</u> to 9-5-14

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Container ID #	Temp (°F) (6.[10]/6.[11])						
TA-54-375 Cell 1 (con	ntinued)						
69620	67.8	63.9	65.1	61.7			
69520	64.9	63.5	65.4	61.7			
69641	63.6	64.0	64.9	().()			
69298	63.7	63.8	64.7	61.6			
LASB02203	63.6	63.3	64.6	6.4			
Ambient Temperature (6.[14])	<u>64.3</u> °F	65.5 °F	66.2F	61.8 °F	°F	0F	°F
End Time (6.[15])	10:50	1231	1312	838			
6.[15]	Operator: <u>5</u>	Operator:	Operator: A	Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

6.[2] Comments:

ATTACHMENT 3 Page 3 of 3

6.[6] Date: From <u>9-29-14</u> to 10-5-14

6.[19] Performed by:	James A.C. Sc. 4	To A S	Tread -	17400	Q + 12 - 110
Operator (print) Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date
Jesse Chave (1)	1214378 30 14.29-14	William Juan	a hulter	20145	8 wo+10-1-14
 Operator (print) (Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date
Inapolitice the Alere	Shranka 19-29-14-	Homarvi		12582	
Operator (pr(nt) Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date
Operator (print) Signature	201458 007 9-30-11	Operator (print)	Signature	77#	Initials Date
To Davida As	Z# Initials Date (1/4977 AA / 9-30-14)	operator (prim)		μ	
Operator (prut) Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date
Sene Chaver Charlens	R145785C 19.30-14		/	/	/ /
Operator (print)	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date
Sessechavor (Juli	12145781 SC 19-1-14		/	/	/ /
Operator (print)	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date

8.1[2] Reviewed by:

SOM or designee (print) Signature Z# Initials Date



ATTACHMENT 4

Page 1 of 3

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

6.[6] Date: From 9-29-14 to 10,5-14

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6]	6.[6] Start Time: <u>1:232</u>	6.[6]	6.[6] Start Time: 1839	6.[6]	6.[6]	6.[6]
And a state of the	6.[6] Start Time: 10,51	Start Time: 1272	Start Time: 1313	Start Time: 18 51	Start Time:	Start Time:	_ Start Time:
TA-54-375 Cell 2							
Calibrated Infrared	Brand: Fluke	Brand: Fluke	Brand: Fluke	Brand: FUKE	Brand:	Brand:	Brand:
Thermometer	Model: 561	Model: 561	Model: 56 Cal. Due Date: 6-12-15	Model: $\leq (a, b)$	Model	Model:	Model:
(6.[7])	Cal. Due Date: <u>6*/2</u> 7. File Number / <i>P</i> 19/2	Cal. Due Date: 6-12-15 File Number 1019 12	Cal. Due Date:	Cal. Due Date: 6/17/15	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:
A 11 / CD			File Number LOISIZ	File Number 101912	File Number	File Number	File Number
Ambient Temperature (6.[9])	62.5 °F	6hq °F	63.1°F	<u>GLZ</u> °F	°F	°F	°F
Container ID #	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
LASB02198	67-6	61.7	62.5	60.9			(
68638	63.2	62.9	63.4	60.9			
69615	63.5	62.4	64.1	61.4			
69635	67.4	63.0	64.4	61.9			
69642	63.3	63.4	64.6	61.5			
69630	63.2	63.3	64.3	61.5			
69633	63.1	62.8	63.6	61.6			
68430	63.7	62.5	63.4	61.0			
68631	62.8	62.2	63.2	61.0			
69634	62.6	62.1	62.7	60,3			
68567	62.7	61.7	62.9	60.4			
94227	62.8	61.8	63.2	60.9			
LASB50442	63.0	62.6	63.6	61.3			
69644	67.2	62.7	63.8	61.4			
LASB50443	63.3	624	63.5	61.2			
69638	62.8	62.3	63.7	61.6			

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Nitrate Salt-Bearing TRU Waste Container Monitoring

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6.[6] Date: From <u>9-29-19</u> to <u>10-9-19</u>

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Container ID #	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
TA-54-375 Cell 2 (co	ntinued)						
68624	67.5	62.5	63.6	(.).3			
68507	67.0	61.9	63.5	61.0			
69568	63.5	61.9	63.6	60.6			
69553	62.8	62.0	63.7	60.8			
69598	62.9	62.6	63.8	61.2			
LASB50559	62.5	621	62.7	61.4			
69015	62.8	62.5	63.5	61.2			
69639	62.6	61.3	63.8	61.4			
69637	62.7	62.7	64.1	61.7			
Ambient Temperature (6.[14])	62.1 °F	62.1 °F	63.4°F	604°F	°F	°F	°F
End Time (6.[15])	10:55			1850			
6.[15]	Operator: <u>JC</u> Operator: <u>UC</u>	Operator: US	Operator:	Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

6.[2] Comments:

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	Nitrate Salt-Bearing TRU Waste Container Monitoring	Document No.: Revision:	EWMO-AREAG-FO1246
		Effective Date:	9-11-2014
UET		Page:	32 of 37

ATTACHMENT 4

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6.[6] Date: From <u>9-29-14</u> to <u>10-5-14</u> 6.[19] Performed by: nua lina 201458 WJ William Jugner -29-1 Operator (print) Signature Signature Z# Operator (print) Z# Initials Date Initials Date Jete Chave Williamuan Dal1571 WT12-1-14 1214572 3019-29-14 luce Operator (print) Initials Date Signature Operator (print) Z# Signature Z# Initials Date U15011 THOMAS VIOIL brygn AA 19-29-14 17363821 to 4 Ina Haurne Signature Operator (print) Operator (print) Z# Signature Initials Date 19-30-1 thea NYOT 1 Sua pr Mg Hawre Operator (print) Operator (print) Signature Signature Z# Initials Date 20145F wy 9- 30'M William Juanes tou Operator (print) Operator (print) Initials Date Signature Z# Signature Initials Date Z# 1214578130 19-30-14 Jone Chaver Operator (print) Operator (print) Gignature Signature Z# Initials Date Z# Initials Date SESSE Chaver 1214578/JC /10-1-14 Operator (print) Signature Z# Initials Date Operator (print) Signature Z# Initials Date

8.1[2] Reviewed by:

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 Date

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ATTACHMENT 5

Page 1 of 2

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

6.[6] Date: From **979-14** to **LO-S-14**

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
	Start Time: <u>(0;58</u>	Start Time: 1239	Start Time: 306	Start Time: 1821	Start Time:	Start Time:	_ Start Time:
TA-54-375 Cell 3	-						
Calibrated Infrared Thermometer (6.[7])	Brand: Fluike Model: 561 Cal. Due Date: 612	Brand: <u>Fluke</u> Model: <u>56</u> Cal. Due Date: <u>62-15</u>	Brand: <i>Elulee</i> Model: 561 Cal. Due Date: 612-15	Brand: $H_{U} < e$ Model: 56	Brand: Model:	Brand: Model:	Brand: Model:
(0.[7])	File Number 10/2/6	File Number 101916	File Number 101916	Cal. Due Date: Cal. 1215 File Number 16116	Cal. Due Date: File Number	Cal. Due Date: File Number	Cal. Due Date: File Number
Ambient Temperature (6.[9])	<u>67.9</u> °F	63.6 °F	64.8°F	<u>62.5</u> °F	°F	°F	°F
Container ID #	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
69519	633	63.1	63.8	62.0			
69645	633	63.2	64.8	62 9			
94068	67.6	63.3	64.2				-
93605	63.7	63.6	64.4	62.8			
69548	63.6	63.7	65.4	63.2			
69604	64.0	64.4	64.4	63.4			
LASB50529	63.7	63,9	63.8	63.7			
LASB50418	63.6	62.8	64.1	63.2			
69036	64.1	63.5	69.7	63.0			
LASB50451	63.8	63.4	64.5	63.0			
69559	64.4	63.7	64.7	63.2			
LASB50448	64.7	63.8	64.5	63.8			
Ambient Temperature [6.[14])	<u>64.2</u> °F	63.6°F	65.2 °F	62.9°F	°F	°F	°F
End Time (6.[15])	11:00	1241	1309	1829			
6.[15]	Operator: <u>JC</u>	Operator:	Operator: 3	Operator:	Operator:	Operator:	Operator:
	Operator:	Operator:	Operato	Operator:	Operator:	Operator:	Operator:

JET	Nitrate Salt-Bearing TRU Waste Container Monitoring	Document No.: Revision: Effective Date: Page:	EWMO-AREAG-FO1246 4 9-11-2014 34 of 37
	ATTACHMENT 5 Page 2 of 2		~
.[6] Date: From <u>9-7</u>	9-14 to 10-5-19		
.[2] Comments:			
.[19] Performed by: Degrator (print) Degrator (print) Degrator (print) Degrator (print) Degrator (print) Degrator (print) Degrator (print) Degrator (print) Degrator (print) Sesse Chance Operator (print) Degrator (print)	Image: SignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateOperator (print)Image: SignatureImage: SignatureZ#InitialsDateOperator (print)SignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDateSignatureZ#InitialsDate	Signature SVIA / Signature Signature Signature Signature /	Night Jool-U Z# Initials Date Z01458 Lot Jool Z# Initials Date /2/08/L/ /10/2) Z# Initials Date /2/08/L/ /10/2) Z# Initials Date ///LOCE J//LOCE Z# Initials Date ///LOCE J//LOCE Z# Initials Date ///LOCE J//LOCE Z# Initials Date ///L Z# Z# Initials Date
SOM or designee (print)	/ / / / Signature Z# Initials Date		

Nitrate Salt-Bearing TRU Waste Container Monitoring	Document No.:EWMO-AREAG-FO-DRevision:4Effective Date:9-11-2014Page:35 of 37	OP-1246
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ATTACHMENT 6 Page 1 of 3

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

6.[6] Date: From 10-2-14 to 10-2-14 Location: 375

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	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]				
Calibrated Infrared	Brand	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:	Brand	Brand:
Thermometer	Model:	Model:	Model	Model:	Model:	Model:	Model:	Model:	Model:	Model:	Model:	Model:	Model:	Model
(6.[7])	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:				
	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number				
Ambient Temperature (6.[9])	°F	°F	°F	°F	°F	°F	•F	°F						
Container ID # (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) . (6.[10]/6.[11])	Temp (*F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) _(6.[10]/6.[11])						

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UET			Document No.:EWMO-AREAG-FO-DOP-1246Revision:4Effective Date:9-11-2014Page:36 of 37												
6.[6] Date:	[6] Date: From 10-2-14 to 10-2-14 Location: 375 Page 2 of 3														
Container 1D # (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6,[10]/6,[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6 [10]/6 [11])	Temp (°F) (6,[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	
						(0.[10]/0.[11])			(0.[10]/0.[11])						
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Ambient															
Temperature (6.[14])	°F	°F	°F	°F	°F	°F	eF	°F	°F	°F	ee	°F		°F	
End Time (6.[15])													·		
6.[15]	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	
	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	
		<u></u>												\rightarrow	

Nitrate Salt-Bearing TRU Waste (Container Monitoring			Document No.: Revision: Effective Date: Page:	EWMO-AREAG-FO-DOP-1246 4 9-11-2014 37 of 37
	ATTACHMEN Page 3 of 3	<u> 6 </u>			
6.[6] Date: From 10-2-14 to 10-2-14 Location: 37 5					
6.[2] Comments: And what he to perfe	ru lioc tina Agu	why the	cs d	we d	1749M.
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	F)				
6.[19] Performed by: William Venn levellen 201458, w, 10.2.19 Operator (print) Signature Z# Initials Date 214578 SC 110-2.19 Operator (print) Strature Z# Initials Date	Operator (print) Operator (print)	/ / Signature Z / / Signature Z	1	Date	
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8.1[2] Reviewed by: Rosa + V Hander Inder Wan 1224934 Kell 10-2	-14				

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						<u>A</u>]	TACHMEN Page 1 of 3	<u>T 6</u>						
				AREA G NIT		TRU WAST	E CONTAIN	ER HOURLY	TEMPERAT	FURE DATA	SHEET			
6.[6] Date:	From 10021	<u>4</u> to [00	314	Location:	375									
	Start Time: 6 [6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6 [6]	Start Time; 6,[6]	Start Time: 6.[6]	Start Time: 6,[6]	Start Time: 6.[6]					
Calibrated Infrared	Brand													
Thermometer	Model													
(6[7])	Cal Due Date	Cal. Due Date	Cal Due Date	Cal Due Date	Cal Due Date	Cal Due Date	Cal. Due Date	Cal Due Date.	Cal. Due Date:	Cal Due Date	Cal Due Date	Cal. Due Date	Cal Due Date	Cal Due Date
	File Number													
Ambient Temperature (6.[9])	°F	°F	°F	°F	°F	•F	°F	°F	°F	°F	°F	°F	eF	eF
Container 1D # (6 [10]/6 [11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6,[10]/6,[11])	Temp (°F) (6 [10]70 [11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6 [10]/6 [11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) _(6.[10]/6.[11]				
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Document No.: EWMO-AREAG-FO-DOP-1246

4 Effective Date: 9-11-2014

Revision

Nitrate Salt-Bearing TRU Waste Container Monitoring

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UET			Document No.:EWMO-AREAG-FO-DOP-1246Revision:4Effective Date:9-11-2014Page:36 of 37												
6.[6] Date:	[6] Date: From 100214 to 160314 Location: 375														
Container ID # (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6 [10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F)							
	(0.[10]/0.[11]/		(0.[10]/0.[11])		(0.[10]/0.[11])	(0.[10]/0.[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])	(6.[10]/6.[11])	
~															
	l														
Ambient Temperature (6.[14])	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	- OF	°F	°F	°F	
End Time (6.[15])															
6.[15]	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	
	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator	Operator:	Operator:	Operator:	

UET		Document No.: Revision: Effective Date: Page:	EWMO-AREAG-FO-DOP-1246 4 9-11-2014 37 of 37				
			ATTACH Page 3				
6.[6] Date: From [0	00214 to 100314	Location: <u>375</u>					
6.[2] Comments:	Inable to porto	an hovely Round	s until fo	athor notic	E por Fol	. Runi	2763216 100219
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6.[19] Performed by:							
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Operator (print)	/ Signature	/ / / Z# Initials Date	Operator (print)	/ Signature	/ / Z# Initials	Date	
Operator (print)	/ Signature	_/ / / Z# Initials Date	Operator (print)	/ Signature	/ / Z# 1nitials	_/ Date	
8.1[2] Reviewed by:							

8.1[2] Reviewed by: Ruser V Hander mark VHan 1224931 Hold U-3-19 SOM or designee (print) Signature Z# Initials Date