From: Haagenstad, Mark P Sent: Wednesday, October 29, 2014 4:08 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; 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; Beard, Carl Allen; Cabbil, Cheryl Denise; Young, Steven L; Erickson, Randy; Funk, David John; Alexander, Rick A; Frederici, Dave; Haagenstad, Mark P

Subject: Daily Technical Submission - October 29, 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 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

October 29, 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 days' 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 29, 2014 HSG data attached.
 - o 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 55 SWBs.

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 being performed on SWB 68685 and SB50522.
 - 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:

Next Call: Thursday, October 30, 2014

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 on- going chemistry / analytical work.	LANL		Complete
2		T A NT		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	LANL		Complete
	discussion on why 231 and 375 Permacon fire suppression systems are not part of the LANL RCRA Hazardous Waste Facility Permit Contingency Plan.			June 5, 2014
5.	Send copy of June 4, 2014 written daily	LANL		Complete
	submission to Trais Kliphuis. Also, include her on future daily submissions.			June 5, 2014
6.	Provide LANL procedures and example records associated with post-1991 TA-55	LANL		Complete
	cementation process discussed on June 6.			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	LANL		Complete
	Document.			L
10.	Provide a list of the analytes for which LANL	LANL		June 9, 2014 Complete
10.	is sampling HSG (CO_2 and LFL analytes).	LAINL		June 11, 2014
11.	Discuss potential sampling of HSG for NO _x .	LANL		Complete
				•
				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)

13.	Respond to NMED email request for information associated with the nitrate salt- bearing parent and daughter waste containers.	LANL	In progress – remaining are portions of item 5	Partially Complete July 9, 2014 (Letter sent addressing items 1-4 and 6-9 of
	WIPP Recovery Daily Meeting Action List item #84 – NMED requested a copy of the LANL remediation records for waste stored in			the email request) July 17, 2014 (Letter sent with updated spreadsheet)
	Panel 6 (Trais Kliphuis) – is a subset of the information in item 5 of this action.			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 (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)
				September 23, 2014 (Tenth submittal in response to item 5)
				October 1, 2014 (Eleventh submittal in
				response to item 5) October 8, 2014
				(Twelfth submittal in response to item 5)
				October 16, 2014
				(Thirteenth submittal in response to item 5)
				October 23, 2014 (Fourteenth submittal in response to item 5)
				in response to item 5) October 27, 2014
				(Fifteenth submittal in
				response to item 5)
				October 28, 2014 (Sixteenth submittal in response to item 5)

	Requested Information	Actionee	Status	Completion Date
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
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		Complete 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	Partially complete.	October 27, 2014 Diagram submitted.
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 will submit this documentation in batches as it is becomes available.	Submitted 100 out of 586 RTRs and documentation on October 3, 2014. Submitted documentation for 101-200 containers on October 10, 2014. Submitted documentation for 201-300 containers on October 16, 2014. Submitted documentation for 301-400 containers on October 23, 2014. Submitted documentation for 401-500 containers on October 27, 2014.
39.	NMED requested a diagram of the location of the thermocouples on 68685 and SB50522.	LANL		Complete October 27, 2014
40.	NMED requested a copy of the safety basis document for remediation planning when it is finalized.	LANL	Document is currently in Draft.	
41.	Trending and correlation of temperature and HSG monitoring data.	LANL	In progress	
42.	Schedule a fourth update on LANL efforts – including teams.	LANL/ NMED	In progress	

Remediated Nitrate Salt Container Headspace Gas Analysis

		680	685			SB5()522	
Date	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H₂ ppm	CO ppm	CO₂ ppm	N ₂ O ppm
10/29/14	122	593	14609	4395	3824	409	45178	877



ATTACHMENT 2

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

6.[6] Date: From <u>10.27.14</u> to <u>11.2.14</u>

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
	Start Time: <u>080/</u>	Start Time: 0930	Start Time:				
TA-54-231							
Calibrated Infrared Thermometer (6.[7])	Brand: <u>Flukk</u> Model: <u>561</u> Cal. Due Date: 7/29/15	Brand: Fluid Model: Stel Cal. Due Date: 129 15	Brand: Model: Cal. Due Date:				
(0.[7])	File Number 101914	File Number 101914	File Number				
Ambient Temperature (6.[9])	55.8 °F	50.9 °F	°F	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])
S818435	57.2	51.2					
S802833	57.1	50.4					
S801676	56.7	50.3					
S816810	55.2	48.0					
70069	55.3	48.8					
S822844	55.2	484					
S825879	54.9	48.2					
S793724	55.4	48.2					
S813545	55.5	47.7					
S822713	56.6	49.4					
S802739	56.7	49.6					
69907	56.7	49.8					
S804995	57.0	50.4					
S816434	58.1	50.8					

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ATTACHMENT 2

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6.[6] Date: From <u>10.27.14</u> to <u>11.2.14</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-54-231 (continued)					The states and	
S805289	57.8	57.3					
S862888	57.5	58.50.8					
70072	57.2	50.3					
S823184	57.0	50.4			1		
S822599	56.6	L19.9					
69904	55.7	48.1					
S805051	55.4	481					
S864213	55.5	48.2					
S853714	55.0	47.7					
S803078	55.0	47.6					
S825878	55.4	485					
S823124	55.6	489					
S804948	57.1	49.6					
S813385	57.4	505					
S842446	58.7	51.5				F 2	
Ambient Temperature (6.[14])	<u>56.5</u> °F	52.0 °F	°F	°F	°F	°F	°F
End Time (6.[15])	0808	0937					
6.[15]	Operator: <u>JR</u> Operator: <u>EC</u>	Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

		Document No .:	EWMO-AREAG-FO P-1246
	Nitrate Salt-Bearing TRU Waste Container Monitoring	Revision:	4
		Effective Date:	9-11-2014
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Page 3 of 3

6.[6] Date: From 10.27.14 to 11.2.14

6.[2] Comments: _____

6.[19] Performed by:							
Jackie Romero	Gachie Romens	11870661 JK 110/27/14		/	/	1 1	
Operator (print)	Bignature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Dat	e
Eloy Di Coldun	15002	111418815 - 110.27-14		/	/	/ /	
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Dat	.e
JasephinaDuri		1152711 A 10/28/14		/	/	_ / _ /	
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Dat	.e
Joshulopal	Hurry	116579,-12-102314		/	/	/ /	
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6.1[2] Reviewed by.		, , , ,					
SOM or designed (print)	/	/ / / /					
SOM or designee (print)	Signature	Z# Initials Date					



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 10.27.14 to 11.2-14

	Mandau	Turadau	337 - 1 1 -	071 1		a	
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6] Start Time: 109	6.[6] Start Time: 1109	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
	Start Time. TOT	start Time: 1100	Start Time:	Start Time:	Start Time:	Start Time:	_ Start Time:
TA-54-375 Cell 1	21. 10						and the second
Calibrated Infrared	Brand: Flui	Brand: Fluce	Brand:	Brand:	Brand:	Brand:	Brand:
Thermometer	Model: 50	Model: 561	Model:	Model:	Model:	Model:	Model:
(6.[7])	Cal. Due Date	Cal. Due Date 01215	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:		Cal. Due Date:
	File Number OPIS	File Number <u>10/915</u>	File Number				
Ambient Temperature (6.[9])	103.4 °F	<u>55,]</u> °F	°F	°F	°F	°F	-10
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])
68685	629	55.3					
68540	62.6	55.3					
68553	1028	55.3					
69445	(03.0	54.2					
69618	63.0	55.6					
69013	Lez.7	56.3					
LASB50522	62.8	56.6					
LASB50452	102.10	563					
LASB50431	12.5	56.3 56.1					
LASB50069	624	54.5					
LASB50073	62.9	543					
69636	62.3	56.3					
69616	62.5	56.4					
69417	102.4	54.5					

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6.[6] Date: From <u>10.27.19</u> to <u>11.2.19</u>

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Container ID #	Temp (°F) (6.[10]/6.[11])						
TA-54-375 Cell 1 (con	itinued)						
69620	62.6	5Ce.7					
69520	102.10	5(0.7					
69641	(ozle	54.7				-	
69298	62.4	R129457.857.0					
LASB02203	62.3	56.4					
Ambient Temperature (6.[14])	635°F	55.9 °F	°F	°F	°F	°F	°F
End Time (6.[15])	11130	113					
6.[15]	Operator:	Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

6.[2] Comments:

\bigcirc	Nitrate Salt-Bearing TRU Waste Container Monitoring	Document No.: Revision: Effective Date:	EWMO-AREAG-FO-2-1246 4 9-11-2014
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6.[6] Date: From <u>/</u>	0.27.14 to 11.2.14	_	
6.[19] Performed by Operator (print)	signature /	1579711 0 10/27/14 Z# Initials Date 11658 Jun 162714	Operator (print)
Operator (print)	Signature	Z# Initials Date //5/97////////28/14 Z# Initials Date	Operator (print) Operator (print)
Operator (print)	Signature	<u>///6578/06//078/9</u> Z# Initials Date	Operator (print)
Operator (print)	Signature	Z# Initials Date	Operator (print)
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Operator (print)	Signature	Z# Initials Date	Operator (print)

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

8.1[2] Reviewed by:

SOM or designee (print) Signature Initials Date

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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 <u>10-27.14</u> to <u>11-7.14</u>

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
	Start Time: 113	Start Time: 1113	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
TA-54-375 Cell 2							
Calibrated Infrared Thermometer (6.[7])	Brand: $PIWLL$ Model: SQ Cal. Due Date: $QIZIS$ File Number $IOI9IZ$	Brand: $\underline{P_{IIII}}$ Model: $\underline{S_{III}}$ Cal. Due Date: $\underline{P_{IIII}}$ File Number $\underline{IO_{IIII}}$	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
Ambient Temperature (6.[9])	(02-7 °F	<u>51.3</u> °F	°F	°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	41.9	51.1					
68638	Lez.1	56.7		,			
69615	(025	56.9					
69635	627	57.1					
69642	107.0	56.8					
69630	(02.9	56.5					
69633	(02.0	57.1					
68430	62.3	Se.y					
68631	102.0	56.9					
69634	101.10	56.6					
68567	101.4	56.0					
94227	102.2	56.7					
LASB50442	62.0	56.7					
69644	(02.0	57.1					
LASB50443	61.8	56.10					
69638	61.8	510.le					

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ATTACHMENT 4

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6.[6] Date: From <u>10.2719</u> to <u>11.2.19</u>

14.,	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Container ID #	Temp (°F) (6.[10]/6.[11])						
TA-54-375 Cell 2 (con	tinued)						
68624	61.9	56.8					
68507	61.7	56.8					
69568	6.1.8	Se. 1					
69553	60.8	Sleile					
69598	60.9	56.3					
LASB50559	11.6	56.6					
69015	61.9	51.2					
69639	(01.7	57.3					
69637	61.7	56.9					
Ambient Temperature (6.[14])	61.9 °F	5(0,7°F	°F	o£	°F		°F
End Time (6.[15])	1119	1119					
6.[15]	Operator:	Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

6.[2] Comments:

Nitrate Salt-Bearing	TRU	Waste	Container	Monnoring
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ATTACHMENT 4 Page 3 of 3

6.[6] Date: From 10.27.14 to 11.2.14

6.[19] Performed by:		- / /				
Josephine Dura	n 2	115197/1 10 110/22/14		/	/	/ /
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date
Doshulonz	A lack here	- 1116598, Ster 102714		1	/	/ /
Operator (print)-	Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date
IssechineDur	Det 1	11529711 10 10/28/14		/	/	/ /
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date
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Operator (print)	(Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date
Dosara a	of thea	111-598, 811, 102814		/	/	/ /
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date
operator (print)				/	/	/ /
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date
operator (print)	/			/	/	//
Operator (print)	/ Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date
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8.1[2] Reviewed by:

SOM or designee (print) Signature Initials Date

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Nitrate Salt-Bearing TRU Waste Container Monitoring	Document No.: Revision:	EWMO-AREAG-FO
	Effective Date:	9-11-2014
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TA-54 AREA G TA-54-375 CELL 3 NITRATE SALT TRU WASTE CONTAINER DAILY TEMPERATURE DATA SHEET

6.[6] Date: From <u>10.27.14</u> to <u>11.2.14</u>

	Monday 6.[6]	Tuesday 6.[6]	Wednesday 6.[6]	Thursday 6.[6]	Friday 6.[6]	Saturday 6.[6]	Sunday 6.[6]
	Start Time: 1100	Start Time: LLD3	Start Time:				
TA-54-375 Cell 3							
Calibrated Infrared Thermometer (6.[7])	Brand: Flefe Model: Sel Cal. Due Date electron File Number 0946	Brand: Fluit Model: So Cal. Due Date: (2015 File Number 10191()	Brand: Model: Cal. Due Date: File Number				
Ambient Temperature (6.[9])	(03.0 °F	<u>51.8</u> °F	°F	°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	(02.6	57.8					
69645	62.8	58,2					
94068	63.3	58.6					
93605	63.7.	58.4					
69548	63.3	58,2					
69604	63.2	58.2					
LASB50529	(03.3	58.5					
LASB50418	63.3	58.0					
69036	43.3	519			-		
LASB50451	(02.7	58.2					
69559	63.3	58.4					
LASB50448	43.3	58.4					
Ambient Temperature (6.[14])	63.5°F	57.8°F	oF	°F	°F	°F	oF
End Time (6.[15])	1109.	1107					
6.[15]	Operator:	Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

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Ċ	Nitrate Salt-Bearing TRU Waste Container Monitoring	Document No.: Revision: Effective Date:	EWMO-AREAG-FO
UET		Page:	34 of 37
	ATTACHMENT 5 Page 2 of 2		
6.[6] Date: From <u>//·2</u>	7.14 to 11-2-14		
6.[2] Comments:			

6.[19] Performed by:		\ \	- /
tosechure Bur	anton	LA 11576	774 NL 110/27/14
Operator (print)	Signature	Ż#	Initials Date
Dosmolopr	- Xpolia	1011-116	58, 14, 10,714
Operator (print)	Signature	Z#	Initials Date
<u>Asephinepu</u>	and the	- 1/57	971 AV 110/28/14
Operator (print)	Signature	$\int Z^{\#}$	Initials Date
)osual o	22 Jakea	116	58120 107814
Operator (print)	Signature	Z#	Initials Date
		1	/ /
Operator (print)	Signature	Z#	Initials Date
	/	/	//
Operator (print)	Signature	Z#	Initials Date
	/	/	//
Operator (print)	Signature	Z#	Initials Date

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

8.1[2] Reviewed by:

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

Nitrate Salt-Bearing TRU Waste Container Monitoring	Document No. Revision Effective Date:	EWMO-AREAG-FO-DOP-1246 4 9-11-2014
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TA-54 AREA G NITRATE SALT TRU WASTE CONTAINER HOURLY TEMPERATURE DATA SHEET

6.[6] Date: From 6-28-14 10 10-28-14 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:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time
Calibrated	0629 Nrand	Dag Virand	0830 Brand	0930 Brand	1031	1130	1227	1328	1424	1523	1638	nzy	6.[6]	6.[6]
Infrared Thermometer	Mode	Model	Model		Brand Model A	Brand	Brand Model A	Brand	Brand	Brand	Brand	Brand	Brand	Brand
(6[7])	nal Due Pate	Cal Due Date	Cal Die Date	A	Gal Due Date	A		Model A	Call Bue Date	Model Chi Due Date	Model	Model A	Vodel	Model
	File Number	File Number	File Number	Cal, Due Date File Number	File Number	Ci Due Date	Cal Bue Date File Number	Ch Due Date File Number			Cal Due Date		Cal Due Date	Cal Due Date
Ambient					rite (vinite)	The Number	Phe Number	Pile Number	File Number	File Number	File Number	File Number	Lile Sumber	File Number
Temperature (6,[9])	52.64	52.14r	51.78	52.12	53.60	55.40F	58.61	6.13	63.24	64.20	61,22	59-66	ok	r
Container ID # (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Femp (°I-) (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)	Temp (°P)	Teurp (*F)					
68685 TI	52.28		51.98	52.13	53.47	55.20	58.24		for the found of the	63,60	61.45	(6.[10]/6.[11])	(6110)(6111)	(6. P .0]/6. [N])
68685 72			51.66	51.92	53.22	59.88	52.84	1.0.37	61.86	12.73	61.19	SGAV	+1/1	
50522 TY		53.83	53.27	53.36	54.31	55,59	52.93	60.03	61.34	62.25	60 33	59.27		
5052255	53.75	53.29	53.30	53.49	54.48	55.79	58.14	60.22	61.46	62.27	60.63	59.52		
					1									
						\bigcirc								
					W	1								
						T	7							

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UET			N	itrate Salt-Bei	ring TRU W	aste Container	• Monitoring				Documer Revision Effective Page:	<i>.</i> [2014	O-DOP-1246
6.[6] Date:	From <u>(0-29</u>	3-14 to 10	-28-14	Location: _	375	<u>A'</u>	TTACHMEN Page 2 of 3	<u>T 6</u>						0
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]	Temp (°F)	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]
			-						_					
							+							
										-				
													\mathbb{N}	
(6.[14])	52.67	<u>25.1</u> %	<u>51.78</u> .F	52.13 .F	53.60 ·r		58.61F	61.73	63.465	64.2	61.22	59,6%	oF	
(o [15])	0630 Decision	0 <u>1</u> 2 <u>9</u>	<u>0830</u>	0931	1032	1131	1228	1329_	1425	7524	1629	1725		
4	Deentor: Operator:	Ordan	Operator Operator	Operator Operator	Operator.	Operator Operator	Operator: Operator:	Operator (Operator Operator	Operator	Operator: Operator:	Operator	Operator Operator:	Operator: \ Operator: \

Document No.: EWMO-AREAG-FO-DOP-12-16 Nitrate Salt-Bearing TRU Waste Container Monitoring Revision: 2 Effective Date: 9-11-2014 UET Page: 37 of 37 ATTACHMENT 6 Page 3 of 3 0 [6] Date: From 10-28-1410 10-28-14 Location: 325 6.[2] Comments No Permacon rea 6 standing Order 1247 R.2 entry in 37 5 2 enne 5 ogger Comput 6 [19] Performed by: Liva 0/142m 9A 10-28-1 Z# Initials Date | **?!4\$77**| **3**C |10-29-14 Operator (print) Operator (print) Signature 74 Initials Signature Date Jegse hun Operator (print) Operator (print) Signature enature Zit Initials Date Z# Initials Date Williams any 201458 201 10-2814 Operator (print) Operator (print) Signature Signature Z.# Initials Date Zt Initials Date Operator (print) Operator (print) Sinature Signatu Zit Initials Date Initials Date Operator (print) Operator (print) Sunature Signature ∾ Z# Initials Date Z_{ii} Initials Date Operator (print) Operator (print) 2.0 Signature Initials Date Signature Initials Date Operator (print) Operator (print) Signature Signature 7.ii Złi Initials Date Initials Date 8 1[2] Reviewed by 224932 BUIN 10-2-8-101

SOM or designee [print] Signature

	Nitrate Salt-Bearing TRU Waste Container Monitoring	Revision:	EWMO-AREAG-FO-DOP-1246
UET		Effective Date: Page:	9-11-2014 35 of 37

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

6.[6] Date: From 10.28-14 to 10-28-14 Location: 74 54 Dome 375

	Start Time: 6.[6]	Start Time: 6.[6] 1925	Start Time: 6.[6] 2040	Start Time: 6.[6] 2/26	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6] 06.3.2	Start Time: 6.[6] O:127	Start Time: 6.[6] 0228	Start Time: 6.[6] 0 32.9	Start Time: 6.[6] 0429	Start Time: 0534	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer (6.[7])	Brand: Model: Cal. Ave Date:	Brand: Model: Cal. Dur Date	Brand: Model: Cal. Due, Date	Brand: Model: Cal. Dug Date:	Brand: Model: Cal. Due Date	Brand: Moorel: Cal. Dyle Rate	Brand: Motel: Cal_Due Date:	Brand: Model Cal. Due Date	Brand: Model: Call Date Rand	Brand: Modul: Cal. Dug Day	Brand: Model: Cal. Due DeteA	Brand: Model: Cal. Due Day	Brand: Model: Cal. Due Date:	Brand: Model: Cal. Due Date:
	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	FileNumber	FileNumber
Ambient Temperature (6.[9])	59.22°F	57.9 °F	56.12°F	<u>55.4</u> °F	54.48°F	<u>53.66</u> °F	53.0°F	52.4°F	<u>51.97</u> •F	5301 °F	52.33°F	52.43 _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])	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])
68685T1	59	57.62	55.79	55.17	54.29	53.61	53.05	52,44	52.10	53.44	52.76	53.13		
68685TE	58.58	57.2	55.41	54.84	53.94	53.33	5276	52.12	51.84	53.16	52.51	52.66		
5052274	58.72	57.88	56,44	55.97	55.25	54.73	54.2	53,69			57 53.68	54.10		NI.
5052275	58.84	57.86	56.41	55.88	55.19	54.66	54.2	53.66	53.31	54.29	.93.71	54.06	NM	1
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					N	1								

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Nitrate Salt-Bearing TRU Waste Container Monitoring	Document No.:EWMO-AREAG-FO-DOP-1246Revision:4Effective Date:9-11-2014Page:36 of 37

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6.[6] Date: From 10-29-19 to 10-29-14 Location: 7.4.54 Dome 3.75

Container 1D # (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (97) (6-[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F (6.[10]/6.[1										
													1	
	<u> </u>			-										
					N	- A								
64									8					.//p
													MA	NIE
Ambient Temperature 6.[14])	59.22 _F	57.1 / °F	56.05 °F	55.4°F	<u>54,44</u> F	<u>53.62</u> °F	53.02 F	52:41 °F	51.95 F	<u>53.01</u> •F	52.56F	52.40 °F		
5.[14]) End Time 5.[15])	1822	1926	2041	2128	2222	2334	0034	0128	6229	0329	0430	2534		
6[15]	Operator:	Operator:	Operator:	Operator;	Operator:	Operator:	Operator:	Operator:	Operatory	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		Nitrate Salt-Bearing TRU Wast	e Container Monitorin	ıg		Document No.: Revision: Effective Date: Page:	EWMO-AREAG-FO-DOP-124 4 9-11-2014 37 of 37
			ATTACHMI Page 3 of	ENT 6 f 3			
		Location: 1A-54 Dome					
6.[2] Comments: D At da	id not Enter ta logger in	permacon per control room	Standing	order all	èa G12	47 R2 Al	1 Temps taken
			Eleka				
				C.C.			
					- AN		
		·······					
6.[19] Performed by: Willie J. B. Const. Operator (print)	Signature O	Imitals Date	Operator (prine)	/	/ // Z# In	/	
Operator (print)		<u>/2199.09 Wm / 10 -28-14</u> Z# Initials Date	Operator (print)	Signature	// Z# In	itials Date	
Operator (print)	Signature	Z34253-TR / 10-29-14 Z# Initials Date	Operator (print)	Signature	Z# In	itials Date	
Operator (print)	Signature A	Z# Initials Date	Operator (print)	Signature	Z# In	itials Date	
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	Z# In	itials Date	
Operator (print)	Signature ·	Z# Initials Date	Operator (print)	Signature	Z# 1n	itials Date	
					/	/	

Som or designee (print) Signature Z# Initials Date