From: Diaz, Tammy

Sent: Wednesday, January 07, 2015 4:39 PM

To: Haagenstad, Mark P; Ryan.Flynn@state.nm.us; Jeff.Kendall@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; butch.tongate@state.nm.us; Cobrain, Dave, NMENV; kathryn.roberts@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; 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; Juarez, Catherine L; Cabbil, Cheryl Denise; Young, Steven L; Erickson, Randy; Funk, David John; Diaz, Tammy; Alexander, Rick A; Frederici, Dave; Juarez, Catherine L; Robinson, Bruce Alan; Lansing, Michael Alan

Subject: Daily Technical Submission - January 7, 2015

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.

Thanks, Tammy 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

January 7, 2015

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 temperature data attached.
- Monitoring Visual Inspections
 - o No abnormal conditions were observed.
- Monitoring headspace gas (HSG)
 - o Containers (SWBs) 68685 and SB50522.
 - Continue daily head space gas (HSG) sample collection.
 - January 7, 2015 HSG data attached.
 - o H₂, CO, CO₂ and N₂O
 - Other containers
 - A minimum of once per month HSG sampling will be conducted.
 - To date in January, LANL has conducted HSG sampling on 23 SWBs.
 - January 7, 2015 HSG data attached.
- 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)
 - o Currently, no further movements or re-packaging are planned.

Other:

- Verbal and written notifications were provided to NMED-HWB's Steve Pullen on December 29, 2014 regarding the Fire Watch that was established within Dome 231 at 2:30 am on December 29, 2014 after a nitrogen leak was discovered in the dry pipe suppression system located within the Permacon in Dome 231. The Fire Watch will be in effect until the system can be repaired.
 - o Repair of one sprinkler head inside Dome 231 is being planned and will be executed upon completion of planning. No container movements are anticipated at this time. The Permittees will notify NMED if this changes.
- During document checks on January 5-6, 2015 it was discovered that five additional documents were inadvertently left out of the Electronic Public Reading Room (EPRR).
 These three Daily Technical Call Submissions and two electronic mail correspondence documents have been added to the EPRR.

Next Call: Thursday, January 8, 2015

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., 24 hour notices).	NMED		Complete 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 ₂ and LFL analytes).	LANL		Complete 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 saltbearing 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.	LANL		Complete July 9, 2014 (Letter sent addressing items 1-4 and 6-9 of the email request)
	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.			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 (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) October 27, 2014
				(Fifteenth submittal in response to item 5) October 28, 2014 (Sixteenth submittal in
				(Sixteenth submittal in response to item 5) November 3, 2014 (Seventeenth 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		Complete October 27, 2014 (Diagram submitted) November 3, 2014 (Table submitted) November 20, 2014 (Revised table

	Requested Information	Actionee	Status	Completion Date
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. Submitted documentation for 501-586 containers on November 12, 2014. Submitted RTR Videos 101-150 on November 12, 2014. Submitted RTR Videos 151-200 on November 20, 2014. Submitted RTR Videos 201-250 on December 1, 2014. Submitted RTR Videos 201-250 on December 1, 2014. Submitted RTR Videos 251-300 on December 19, 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		Complete November 3, 2014
43.	Schedule a fifth update on LANL efforts – including teams.	LANL/ NMED		Complete November 20, 2014

	Requested Information	Actionee	Status	Completion Date
44.	Schedule a sixth update on LANL efforts –	LANL/		Complete
	including teams.	NMED		December 9, 2014
45.	NMED requested documentation regarding	LANL	In Progress	
	CIN01 drums.		Additions to original	
			questions added during	
			technical phone call	
			December 9, 2014.	
46.	NMED requested documentation regarding	LANL	In Progress	
	duplicate drum number.			
47.	NMED requested the ESS plan for	LANL	Document is currently	
	temperature control and sampling once		in Draft.	
	finalized.			
48.	Schedule a seventh update on LANL efforts –	LANL/	In Progress.	
	including teams.	NMED		

	68685			SB50522			69298					
Date	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm
01/07/15	134	367	10024	2728	1837	497	40582	1056	646	767	9578	1203

69630			69636			69642						
Date	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm
01/07/15	335	494	9462	602	87	211	4283	348	68	105	2095	120

SB02203			SB50073				SB50431					
Date	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
01/07/15	112	84	2254	77	864	979	7575	2131	713	414	6473	1015

	SB50443							
Date	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm				
01/07/15	726	747	9886	1578				

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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>1-5-15</u> to <u>1-11-15</u>

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
	Start Time: 0853	Start Time: <u>0928</u>	Start Time:	Start Time:	Start Time:	_ Start Time:	_ Start Time:
TA-54-231							
Calibrated Infrared	Brand: Fluke	Brand: Fluke Model: 5Lel	Brand:	Brand:	Brand:	Brand:	Brand:
Thermometer	Model: 561	Model: 54	Model:	Model:	Model:	Model:	Model:
(4.2.1[1][B])	Cal. Due Date 7/29/15	Cal. Due Date: 1795	Cal. Due Date:				
	File Number 161974	File Number 101974	File Number	File Number	File Number	_ File Number	_ File Number
Ambient Temperature (6.[7])	27.0 °F	33.4 °F	°F	°F	°F	°F	°F
Container ID #	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])				
S818435	27.5	34.5					
S802833	26.7	33.4					
S801676	26.6	33.					
S816810	24.7	31.8					
70069	24.1	3.4					
S822844	24.5	31.7					
S825879	24.9	32.0					
S793724	24.8	31.9					
S813545	24.9	31.8					
S822713	26.5	33.4					
S802739	26.7	33.9					
69907	26.6	33.8					
S804995	27.2	34.1					
S816434	28.2	36.5					

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6.[6] Date: From <u>1-5-15</u> to <u>1-11-15</u>

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Container ID #	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
TA-54-231 (continued	d)						
S805289	28.3	35.0					
S862888	27.4	34.9					
70072	27.1	34.3					
S823184	26.7	34.7					
S822599	26.7	34.					
69904	25.4	33.1					
S805051	25.1	37.7					
S864213	25.4	32.5					
S853714	25.2	33.2					
S803078	25.3	33.5					
S825878	25.4	33.7					
S823124	25.6	33.4			2		
S804948	27.4	35.1					
S813385	27.5	35.4					
S842446	29.1	36.7					
Ambient Temperature 6.[12])	29.2 °F	35.4 °F	°F	°F	°F	°F	°F
End Time (6.[13])	0859	0933					
6.[13]	Operator: JR	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:
	Operator: 5C	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:

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5.[6] Date: From <u>1-5-</u>	-15 to <u>1-11-15</u>							
5.[2] Comments:								
[17] Performed by:								
Jackie Romero	Dackie Romero	11870661	TR 11-5-15		/	/	/	_/
Operator (print)	Signature	Z# 1:	nitials Date	Operator (print)	Signature	Z#	Initials	Date
Eloy D. Corduna	1 ES 3 ha	1111188 /	EC /11.5.15		/	/		/
Operator (print)	Signature	Z# I	nitials Date	Operator (print)	Signature	Z#	Initials	Date
Josephine Durar	Axam	11519711			/	/	_ /	/
Operator (print)	Signature /		nitials Date	Operator (print)	Signature	Z#	Initials	Date
THOMAS VIGIL	1 1-11	1236382 1.	tu 11/6/15		/	/	/	/
Operator (print)	Signature		nitials Date	Operator (print)	Signature	Z#	Initials	Date
	/	/ /	/			/	/	/
Operator (print)	Signature	Z# lı	nitials Date	Operator (print)	Signature	Z#	Initials	Date
	/	/ /	/		/	/		/
Operator (print)	Signature	Z# Ir	nitials Date	Operator (print)	Signature	Z#	Initials	Date
	/	/ /	/		/	/	/	/
Operator (print)	Signature	Z# Ir	nitials Date	Operator (print)	Signature	Z#	Initials	Date
.1[2] Reviewed by:								
	1	/ /	/					
SOM or designee (print)	Signature		nitials Date					
	5							

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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 1-5-15 to 1-11-15

			Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
			6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
			Start Time: 1636	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
1				1118					
	TA-54-375 Cell 1								
	Calibrated Infrared	đ	Brand: Fluke	Brand: FLKE	Brand:	Brand:	Brand:	Brand:	Brand:
	Thermometer		Model: Sal	Model: _ 56]	Model:	Model:	Model:	Model:	Model:
	(4.2.1[1][B])		Cal. Due Date: Great	Cal. Due Date: 6/12/15	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:
			File Number <u>101915'</u>	File Number	File Number	File Number	File Number	File Number	File Number
	Ambient Tempera (6.[7])	ture		<u>54.5</u> °F	oF	oF	°F	°F	°F
	Container ID) #	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
1	68685		52.9	55.4					
		68540	52.3	55.2					
Ш	LA00000070503	68553	52.3	54.7					
П	69445		52.71 51:3	55.4					
1	69618		51.5	54.6 55.5					
	69013		52.5						
	LASB50522	2	Sy.0	56.1					
	LASB50452	2	54.6	563					
	LASB5043	1	34.4	56.6					
	LASB50069	9	52.7	554					
	LASB50073	3	53.4	55.2					
	69636		54.2	56.2					
	69616		54.0	36.0					
1	69417		53.7	55.8					

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6.[6] Date: From <u>1-5-15</u> to <u>1-11-15</u>

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Container ID #	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
TA-54-375 Cell 1 (con	tinued)						
69620	53.4	55.3					
69520	52.4	56.1					
69641	53.8	56.4					
69298	54.0	36.4					
LASB02203	53.9	56.7					
Ambient Temperature (6.[12])	49.5 °F	55.3 ∘ _F	oF	°F	°F	°F	oF
End Time (6.[13])	1042	112)					
6.[13]	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:

6.[2] Comments:	
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6.[6] Date: From <u>1~5</u>	15 to 1-11-15					
0.[0] Date. 110111 <u>[3</u>	10 [11 13					
6.[17] Performed by:	1 1/6-4	. 11		,	,	, ,
Operator (print)	Signature	/ 73/382/ 4 / 1 5 15 Z# Initials Date	Operator (print)	Signature	/	Initials Date
Operator (print)		/116593/ 2 / 0 0 515 Z# Initials Date	Operator (print)	/ Signature	/ Z#	/ / / Initials Date
'Hanstille	Signature /	1236382/4/16/15	<u></u>	/	/	_ / _ /
Operator (print)	Signature	7/16598/ De 1010615	Operator (print)	Signature /	Z# /	Initials Date
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature /	Z# /	Initials Date
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date
Operator (print)	/ Signature	Z# Initials Date	Operator (print)	/ Signature	/ Z#	/ / / / / Initials Date
	/	//		/		/ /
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date
8.1[2] Reviewed by:						
	/	/ / /				
SOM or designee (print)	Signature	Z# Initials Date				

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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 <u>1-5-15</u> to <u>1-11-15</u>

	Monday	Tuesday	Wednesday	Thursday	Eridou	Cotundan	C1
	6.[6]	6.[6]	6.[6]	6.[6]	Friday 6.[6]	Saturday 6.[6]	Sunday 6.[6]
	Start Time: 1043	Start Time: 1127	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
TA-54-375 Cell 2							
Calibrated Infrared	Brand: +14Ke	Brand: Fluke	Brand:	Brand:	Brand:	Brand:	Brand:
Thermometer	Model: 501	Model: SL)	Model:	Model:	Model:	Model:	Model:
(4.2.1[1][B])	Cal. Due Date: 6/12/15	Cal. Due Date: 6/12/15	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:
	File Number 10/912	File Number 101912	File Number	File Number	File Number	File Number	File Number
Ambient Temperature	52.3 ∘ _F	56.\ _{°F}	°F	°F	۰F	OF.	OF
(6.[7])	1	1	Г	r	P	°F	°F
Container ID #	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)
	(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])
LASB02198	49.5	54.4					
68638	31.9	56.1					
69615	52.4	56.7					
69635	52.4	57.1					
69642	52.8	57.7					
69630	52.)	56.8					
69633	57.0	56.9					
68430	527	57.4					
68631	51.0	56.5					
69634	50.2	56.4					
68567	48.6	56.1					
94227	50.1	56.4					
LASB50442	52.3	56.7					
69644	51.3	36.8					
LASB50443	50,1	54.4					
69638	<1.7	55.5	V				

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ATTACHMENT 4 Page 2 of 3

6.[6] Date: From <u>1-5-15</u> to <u>1-11-15</u>

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Container ID #	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])				
A-54-375 Cell 2 (con	tinued)						
68624	51.7	35.6					
68507	57.5	57.5					
69568	49.7	58 6					
69553	49.5	56.1					
69598	48.5	57.4					
LASB50559	50.5	57.5					
69015	52.3	57.6					
69639	52.5	56.5					
69637	51.	54.9					
mbient Temperature	56.8°F	56.9 °F	°F	oF	oF	°F	°F
nd Time (6.[13])	1049	1128					
6.[13]	Operator:	Operator: Operator:	Operator:	Operator:	Operator:	Operator:	Operator:Operator:

zj comments.	 		 	

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ATTACHMENT 4

Page 3 of 3

6.[6] Date: From <u>1-5</u>	5-15 to <u>1-11-15</u>	=						
6.[17] Performed by: Operator (print)	Signature		V//ISIS	Operator (print)	/ Signature	/_ Z#	/ Initials	/ Dat
Operator (print)	Signature) Z# 1#A	itials Date	Operator (print)	Signature	Z#	Initials	Dat
Operator (print)	Signature		tials Date (1010615	Operator (print)	Signature /	Z#	Initials	Dat
Operator (print)	Signature	Z# 10	tials Date	Operator (print)	Signature /	Z# /	Initials	Date /
Operator (print)	Signature	Z# Ini	itials Date	Operator (print)	Signature /	Z# /	Initials	Date /
Operator (print)	Signature /	Z# Ini	itials Date	Operator (print)	Signature /	Z# /	Initials /	Date /
Operator (print)	Signature	Z# Ini	tials Date	Operator (print)	Signature	Z#	Initials	Date
8.1[2] Reviewed by:								
SOM or designee (print)	/ Signature	/ / Z# Ini	tials 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 <u>1-5-15</u> to <u>1-11-15</u>

UET

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
	Start Time: 1836	Start Time: 1117	Start Time:	Start Time:	Start Time:	Start Time:	_ Start Time:
TA-54-375 Cell 3							
Calibrated Infrared	Brand: Fluke	Brand: Tluke	Brand:	Brand:	Brand:	Brand:	Brand:
Thermometer	Model: 561	Model: Sal	Model:	Model:	Model:	Model:	Model:
(4.2.1[1][B])	Cal. Due Date: 6 12 15	Cal. Due Date: CIRILS	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:
	File Number 101416	File Number 1010/16	File Number	File Number	File Number	File Number	File Number
Ambient Temperature (6.[7])	<u>≤0.Z</u> °F	<u>52.5 ∘</u> F	°F	°F	°F	oF	oE
Container ID #	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
69519	52.4	56.2					
69645	53.2	56.2					
94068	53.4	55 U					
93605	51.8	22.0					
69548	51.5	54.9					
69604	52.6	22.6					
LASB50529	53.0	22.2					
LASB50418	53.5	55.8					
69036	53.	55.4					
LASB50451	51.5	55.1					
69559	51.2	55. 3					
LASB50448	51.2	53.4					
Ambient Temperature 6.[12])	52.2 °F	<u>53.</u>	°F	°F	°F	oF	
End Time (6.[13])	1635	1117					
6.[13]	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:
	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:

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UET

Document No.: EWMO-AREAG-FO-L

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Effective Date: 11/03/14

Page:

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ATTACHMENT 5 Page 2 of 2

6.[6] Date: From /	-5-15 to 1-11-15	_							
6.[2] Comments:									
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			ell.	8.					
				100 - 100		7			
C [16] D C 11	1 1		,						
6.[17] Performed by:			+	1)-		/	,	,	,
Operator (print)	Ci and	/ <u>/</u>	82/ Y√ Initials	/ 1/3/3S	Operator (print)	Signature	/ 	/ Initials	/ Date
Jorney Land	Signature			1010515	_	/	/	/	/
Operator (print)	Signature)	/ (45° 7#	Initials	7.0(0)/) Date	Operator (print)	Signature	Z#	Initials	Date
THOUSE VOTE		1362	/	116/15		/	/	/	/
Operator (print)	Signature	Z#	Initials	Dalte \	Operator (print)	Signature	Z#	Initials	Date
) 05 decalors		111657	8, Sev	1010615			/	/	/
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
		/	/	/	Operator (print)	/ Signature	/ Z#	/ Initials	/ Date
Operator (print)	Signature	Z#	Initials	Date	Operator (print)	/	Δπ	/	Date /
Operator (print)	/ Signature	/ 	/ Initials	/ Date	Operator (print)	Signature	/ Z#	Initials	/ Date
Operator (print)	Signature	L#	minais	Date					
8.1[2] Reviewed by:	•								
SOM 1 - 1 - 1 - 1	/	/	/	/					
SOM or designee (print	t) Signature	Z#	Initials	Date					

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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: F	from 1-6-1	5 to 1-6	-15	Location:	375	24.514	5							
	Start Time: 6.[6]	214628 1425	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 Thermometer	Brand: Mollel:	Brand: Modul:	Brand: Modul:	Rrand: Model	Brand: Model:	Brand: Model:	Brand: Model:	Brand: Model:	Brand: Model:	Brand: Model:	Brand: Model:	Bound: Model	Brand. Model:	Brand: Model:
(4.2.1[1][B])	Cal. Dee date:	Cal. Line Vate:	Cal. Due Date	Cal. Dut Date.	Cal. Line Pate:	Gal Due Dale: File Number	Cal. De Nate.	Cal. Die Dite:	Cal. Da Dale:	Cal. Da Da	Cal. Due Dad	Cal. Durwater	Cal. Due Dute:	Cal. Due Date:
Ambient Temperature (6.[7])	48.17 °F	48.88F	49.15°F	51.01 °F	51.73°F	5404F	53,69°F		54.29°F		53,95F	51.60 _F		°F oF
Container ID # (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	1emp (°F) (6.[8]/6.[9])					
68685 TI		90.85	51,11	52.82	52,83	54.88	53,99	54.27	53, 23	54.65	53,68	51.71		
68685 TZ	49.47	50.01	50,30	92.06	51.87	54.12	53.05		54.71	53.74	92.89	50.88		
50522 TY		50,07	50.77		51.89	53.17	52.91	53.16	53.52		53.00	51.57		
50522 75	49.13	41.60	41.78	50.96	51.54	52.95	52.71	53.05	53,43	53.47	52,81	51.29		
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Revision:

5 Effective Date: 11/03/14

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ATTACHMENT 6 Page 2 of 3

6.[6] Date: From 1-6-15 to 1-6-15 Location: 375

Container ID # (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])												
													 	
									1					LA
									10					VI
													1	
Ambient Temperature (6.[12])	48.17F	48.88F	49.15°F	91.01 °F	51,73°F	54.06F	53.69°F	54.33°F	54.81°F	54.88	53,94°F	51.60F	oF	F
	0652	0733	0830	0931	1029	1/27	1229	1329	1431	1532	1831	1728		
6.[13]	Operator:	Operator	Operator:	Operator	Operator	Operator	Operator:	Operator:						
	Operator:	Operator:	Operator:	Operator:	Operator:	Operator	Operator:	Operator:						

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ATTACHMENT 6
Page 3 of 3 Location: 375 6.[6] Date: From |-6-15 to |-6-15 6.[2] Comments: 6.[17] Performed by: belliam Juan Operator (print) Signature Initials. Operator (print) Initials Date 2145783< 11-6-15 Operator (print) Operator (print) Signature Initials Date Initials Date Operator (print) Signature Initials Date Operator (print) Signature Z# Initials Date Operator (print) Signature Initials Date Operator (print) Signature Z# Initials Date Operator (print) Signature Z# Initials Date Operator (print) Signature Initials Date Signature Z# Initials Date Operator (print) Z# initials Date Signature Operator (print) Z# Initials Date Signature Operator (print) Signature Initials Date

8.1[2] Reviewed by:

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SOM or designee (print)

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ATTACHMENT 6
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TA-54 AREA G NITRATE SALT TRU WASTE CONTAINER HOURLY TEMPERATURE DATA SHEET

6.[6] Date: From 01-06-15 to 01-07-15 Location: 375

	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6] 2025	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6] 2.329	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6] 0424	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer (4.2.1[1][B])	Model: Cal. Duo Date: File Number	Model: Model: Cal. Due Date: File Number	Rrand: Model A Cal. Due Date: File Number	Modul: A Cal. Dua Date:	Model: Cal Due Date: File Number	Brand: Moltel: Cal. Due Date: File Number	Modul: Cal. Due Date: File Number	Brand: Model: Car. Due Date: File Number	Brand: Model: Cal Du Date: File Number	Model: Model: Cal. Due Date: File Number	Brand: Model: Cal. Dua Date: File Number	Model: Model: Cal. Due Date: File Number	Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[7])	51.01 °F	52.2 °F	52.02 °F	50.62F	<i>50.68</i> °F	50.89°F	57.05°F	50,65°F	<i>50.8</i> 9°F	50.71 °F	50.61 °F	50.28°F		
Container ID # (6,[8]/6,[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6,[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6,[8]/6,[9])	Temp (°F) (6.[8]/6.[9])
10/68685	51.83	53.14	52.93	51.69	51.93	52.22	52.44	52.16	52.42	52.34	52.35	52.17		LA
T(2) 68685	50.9	52.47	52-29	50.97	51.18	51.48	51.69	51.38	51.62	51.5	51.46	51.2		
1(4)50522	51.54	52.32	52.06	51.38	51.41	51.53	57.63	51.44	51.59	51.53	51.54	51.41		
TCS) 50522	57.17	51.98	51.71	51.02	51.07	51.19	57.33	51.12	51.28	51.19	51.17	51.02		
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ATTACHMENT 6 Page 2 of 3

6.[6] Date: From 01-06-15 to 01-07-15 Location: 375

Container ID # (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6 [8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6_[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6,[8]/6,[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
						IA								
						N							MA	-
Ambient Temperature (6.[12])	<i>51.01</i> °F	52.2 °F	52.02°F	50.62°F	50.68F	50.89F	57.05°F	50.65°F	<i>50.92</i> °F	50.69°F	50.61 of	<i>50.28</i> °F	°F	°F
End Time (6.[13])	1828	1926	2025	2124	2222	2329	0025	0127	0225	033/	0425	057/		
6.[13]	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:

Document No.: EWMO-AREAG-FO-DOP-1246

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ATTACHMENT 6 Page 3 of 3

6.[6] Date: From 01-06-15 to 01-07-15	Location: 375	

6.[2] Comments: Did not cuter Dome 375 Permacon Par Standing order 1247 Rev-2, Transportures were taken from dome 375 Control room, using duta logger.

Willie 5 6	Not Ell	£1/12	909+ lige 1 01-07-1
Operator (print)	Signature	Z#	Initials Date
Timey Rome	50-1-1	2342	53-1R101-07-
Operator (print)	Signature	Z#	Initials Date
	/	/	/ /
Operator (print)	Signature	Z#	Initials Date
		/	/ /
Operator (print)	Signature 14 A	Z#	Initials Date
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Operator (print)	Signature	ZH	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:
SOM or designee (print)