From: Haagenstad, Mark P

Sent: Wednesday, April 22, 2015 4:52 PM

To: Ryan.Flynn@state.nm.us; Jeff.Kendall@state.nm.us; John Kieling; steve.pullen@state.nm.us; 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; Alexander, Rick A; Baumer, Andy; Martinez, Saundra; Sauer, Selena Z; Schreiber, Arleen Thorn; Maestas, Pamela Therese; Hargis, Kenneth Marshall; Cabbil, Cheryl Denise; Young, Steven L; Erickson, Randy; Funk, David John; Alexander, Rick A; Frederici, Dave; Robinson, Bruce Alan; Lansing, Michael Alan; Tymkowych, John M; Diaz, Tammy; Branch, Yvette S; Guffee, Debi; Armijo, Karen (CONTR); Saladen, Michael Thomas; epccat@lanl.gov; Vigil-Holterman, Luciana R; Juarez, Catherine L; Haagenstad, Mark P

Subject: Daily Technical Submission - April 22 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.

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

April 22, 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.
- o Suspect nitrate salt-bearing waste containers.
 - Containers are located in the 375 Permacon.

• Monitoring - Daily Temperature

- o Temperatures remain below 90°F.
 - Previous day's 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.
 - April 22, 2015 HSG data attached.
 - \circ H₂, CO, CO₂ and N₂O.
- Other containers:
 - A minimum of once per month HSG sampling will be conducted.
 - To date in April, LANL has conducted HSG sampling on 59 containers.

• Additional measures currently underway

- o 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 other SWB overpacks (containing 55-gallon drums of remediated nitrate salt-bearing waste) and four suspect nitrate salt-bearing waste POCs.
 - 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 occurring.

Other:

Next Call: Thursday, April 23, 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 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 saltbearing 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. 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. August 7, 2014 (Items addressing items 2 - August 7, 2014) (Items addressing items 2 - August 7, 2014) (Items addressing items 3 - August 14, 2014) (Items addressing items 5 - August 12, 2014) (Items addressing items 5 - August 22, 2014) (Items addressing items 5 - August 22, 2014) (Items addressing items 5 - August 22, 2014) (Items administral in response to item 5) August 22, 2014 (Items administral in response to item 5) September 4, 2014 (Seventl submittal in response to item 5) September 7, 2014 (Items administral in response to item 5) September 2, 2014 (Visith submittal in response to item 5) September 2, 2014 (Visith submittal in response to item 5) September 2, 2014 (Visith submittal in response to item 5) Cechober 1, 2014 (Thirteenth submittal in response to item 5) October 22, 2014 (Twelfth submittal in response to item 5) October 27, 2014 (Thirteenth submittal in response to item 5) October 27, 2014 (Thirteenth submittal in response to item 5)
(Fifteenth submittal in response to item 5) October 28, 2014 (Sixteenth submittal in

	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		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 submitted)

	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 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 251-300 on December 19, 2014. Submitted RTR Videos 301-312 on January 15, 2015.
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

	Requested Information	Actionee	Status	Completion Date
43.	Schedule a fifth update on LANL efforts – including teams.	LANL/ NMED		Complete November 20, 2014
44.	Schedule a sixth update on LANL efforts – including teams.	LANL/ NMED		Complete December 9, 2014
45.	NMED requested documentation regarding CIN01 drums.	LANL		Complete Email- February 3, 2015 Letter- February 19, 2015
46.	NMED requested documentation regarding duplicate drum number.	LANL	In progress	
47.	NMED requested the ESS plan for temperature control and sampling once finalized.	LANL	Document is currently in Draft.	
48.	Schedule a seventh update on LANL efforts – including teams.	LANL/ NMED		Complete January 29, 2015
49.	Fire suppression repair plan for Dome 231	LANL		This repair plan is no longer necessary because drum movement did not occur during the repair process. Repair is complete.
50.	NMED requested information regarding solution packages 36, 37, 57 and 78.	LANL		Complete. Email – February 17, 2015. Letter- March 19, 2015.
51.	NMED requested copies of any procedures regarding cementation in bags.	LANL		March 19, 2015 Confirmation that no specific procedure can be located for cementation in bags.
52.	NMED requested information on the percentage of the 55 SWBs that, based on SWB HSG data, appear to have chemical reactions occurring within the waste.	LANL		Complete. Discussed during technical meeting on April 16, 2015. Email follow-up on April 20, 2015.
53.	NMED requested the document "TA-55 Cement Fixation Drum Logbook" referenced in the CCP AK document.	LANL	In progress	
54.	NMED requested summary sheet for HSG data.	LANL		Complete April 9, 2015.

	Requested Information	Actionee	Status	Completion Date
55.	NMED requested additional discussion on engineering options for cooling in Summer months.	LANL		Complete. Discussed during technical meeting on April 16, 2015.
56.	NMED requested references in Technical Assessment Team report Waste Isolation Pilot Plant (WIPP): Chemical Reactivity and Recommended Remediation Strategy for Los Alamos Remediated Nitrate Salt (RNS) Wastes.	LANL		Complete April 9, 2015.
57.	Schedule an eighth LANL update meeting to continue technical discussions associated with remediation options, planning and other topics of interest.	LANL/ NMED		Complete April 16, 2015.

Remediated Nitrate Salt Container Headspace Gas Analysis

		680	685			SB50	0522	
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
04/22/15	141	374	8517	2024	2727	431	34603	1059



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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>4-20-15</u> to _____

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6] 1125	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
	Start Time:	Start Time: 0920	Start Time:	Start Time:	_ Start Time:	Start Time:	_ Start Time:
TA-54-231	N- 4/26/15						
Calibrated Infrared	Brand. Fluke	Brand: FIUKE	Brand:	Brand:	Brand:	Brand:	Brand:
Thermometer	Model: 56(Model: 561	Model:	Model:	Model:	Model:	Model:
(4.2.1[1][B])	Cal. Due Date: 7/24/15	Cal. Due Date: 7/19/15	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date	Cal. Due Date:
	File Number <u>101974</u>	File Number 10/974	File Number	File Number	File Number	File Number	File Number
Ambient Temperature (6.[7])	<i>57.</i> 2 ∘ _F	<i>57.6</i> °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])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
S818435	57.4	54.9				to the sale of the sale	
S802833	56.6	54.0					
S801676	56.3	54.6					
S816810	56.2	55.1					
70069	56.2	54.8					
S822844	56.2	55.1					
S825879	56.6	55.2					
S793724	56.4	55.4					
S813545	56.4	55.0					
S822713	56.4	54.6					
S802739	56.8	54.0					
69907	56.5	53.6					
S804995	57.2	54.0					
S816434	58.2	55.8					

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6.[6] Date:	From	to	

	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])
A-54-231 (continued	d)						
S805289	58.0	54.7					
S862888	56.8	54.2					
70072	56.7	54.1					
S823184	57.2	54.8					
S822599	57.2	55.1					
69904	56.7	55.3					
S805051	56.4	55.4					
S864213	56.4	55.4					
S853714	54.4	55.3					
S803078	56.5	54.9					
S825878	56.7	55.6					
S823124	54.7	55.0					
S804948	57.2	55.2		-			
S813385	57.7	55.9			V)		
S842446	57.8	55.9					
mbient Temperature	<i>56.</i> 4 °F	53.7 °F	°F	°F	°F	°F	°F
.[13])	1127 14/20/15						
nd Time (6.[14])	-6952	0922					
6.[14]	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:
	Operator: 17/	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:

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6.[6] Date: From to 6.[2] Comments: _ 293178 6.[18] Performed by: TRATT DIA Operator (print) Signature Z# Initials Date Operator (print) Signature C Z# Initial/s Date/ 123001 Operator (print) Signature Initials Date Operator (print) Signature Z# Initials Date 16/21/15 Operator (print) Date, Signature Z# Initials Date Signature Operator (print) Z# Initials THUNGS VIGI すい 14/21/15 Operator (print) Signature Z# Initials Date Operator (print) Signature Initials Date Operator (print) Signature Z# Initials Date Operator (print) Z# Signature Initials Date Operator (print) Signature Z# Initials Date 9.1[2] Reviewed by: SOM or designee (print) Signature Initials Date

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

6.[6] Date: From 642015 to 042615

	Monday 6.[6] 69 49 Start Time:	Tuesday 6.[6] Start Time:	Wednesday 6.[6] Start Time:	Thursday 6.[6] Start Time:	Friday 6.[6] Start Time:	Saturday 6.[6] Start Time:	Sunday 6.[6] Start Time:
TA-54-375 Cell 1	0498	(5 1008					
Calibrated Infrared Thermometer (4.2.1[1][B])	Brand: Flux & Model: 56 Cal. Due Date: 06 [2] 5 File Number 01 975	Brand: Fluce Model: 561 Cal. Due Date 06(215) File Number	Brand:	Brand: Model: Cal. Due Date: File Number	Model:	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[7])	53.7°F	File Number 101915	°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])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
68685	54,5	56.3					
LA00000070503 68553	54.5 54.3	56.3 56.2					
69445	54.7	56.3					
69618 69013	54,2	55.9 56.4					
LASB50522	55.6	57.0					
LASB50452	556	57.0					
LASB50431	53.5	56.9					
LASB50069	54.9	56.8					
LASB50073	54.3	56.8					
69636	55.5	56.7					
69616 69417	35.5	57.0 56.9					

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6.[6] Date: From 042015 to 047615

	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 (cor	itinued)						
69620	55.3	56.5					
69520	55/	56.9					
69641	55.6	57.1					
69298	553	57.2					
LASB02203	55.7	56.9					
Ambient Temperature (6.[13])	31/3F	56.20F	°F	°F	°F	°F	oF
End Time (6.[14])	0955	1013					
6.[14]	Operator: Operator:	Operator: Operator:	Operator:	Operator:	Operator:	Operator:	Operator:

6.[2] Comments:		
		3 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3

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6.[6] Date: From 042015 to 042615

6.[18] Performed by:	•							
Tima Aguirra	Rudan	hver	nAA 14-20-15		/	/		/
Operator (point)	Signature	Z#	Initials Date	Operator (print)	Signature	Z#	Initials	Da
Oslea Loper		11165	98/ULI 047015			/	/	/
Operator (print)	Signature	Z#	Initials Date	Operator (print)	Signature	Z#	Initials	Da
liva favirra	*//	_ nua	MD41042115			/	/	/
Operator (print)	Signature Signature	Z#	Initials Date	Operator (print)	Signature	Z#	Initials	Da
	/	/	/ /			/		/
Operator (print)	Signature	Z#	Initials Date	Operator (print)	Signature	Z#	Initials	Da
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Operator (print)	Signature	Z#	Initials Date	Operator (print)	Signature	Z#	Initials	Da
	/	/	/ /		/	/		/
Operator (print)	Signature	Z#	Initials Date	Operator (print)	Signature	Z#	Initials	Da
	/	/	/ /		/	/		/
Operator (print)	Signature	Z#	Initials Date	Operator (print)	Signature	Z#	Initials	Da
9.1[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>4.20.15</u> to <u>4-26-15</u>

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
	Start Time: <u>09 5 6</u>	Start Time: 1014	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
TA-54-375 Cell 2							
Calibrated Infrared	Brand: Fluke	Brand: Pluke	Brand:	Brand:	Brand:	Brand:	Brand:
Thermometer	Model: 561	Model: 56(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 101912	File Number 61912	File Number	File Number	File Number	File Number	File Number
Ambient Temperature (6.[7])	<u>55.7</u> °F	57.0°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])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
LASB02198	561	57.1					
68638	56.6	56.6					
69615	55.4	56.7			3		
69635	56.0	57.1					
69642	55.8	56.9					
69630	56.4	52.0					
69633	56.3	58.1					
68430	564	51.7					
68631	550	56.8					
69634	757	57,7	Ð				
68567	55.9	57.4					
94227	55.7	57.4					
LASB50442	565	5711					
69644	56.5	58.5056.8					
LASB50443	561	57,1					
69638	56.9	57.5					

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6.[6] Date: From 042015 to 042615

UET

6.[2] Comments:

	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])				
TA-54-375 Cell 2 (co	ntinued)						
68624	56.6	58.7					
68507	5616	57,5					
69568	56.8	57,0					
69553	56.4	56.9					
69598	56.1	56.8					
LASB50559	561	215913513					
69015	56.8	58.0					
69639	57.3	58,2					
69637	56.9	57.8					
Ambient Temperature (6.[13])	0001555.4 °F	57.2°F	°F	°F	°F	°F	°F
End Time (6.[14])	7 0 17 10-37	1019					
6.[14]	Operator: Operator:	Operator: TA	Operator:	Operator:	Operator:	Operator:	Operator:

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6.[6] Date: From <u>047015</u> to <u>047615</u>

6.	[18] Performed by:	o		O .	
_	The Aguirre	Marche a	ma tro	max	4-20-15
	Operator (print) /	Signature (X)	Z#	Initials	Date
- 1	Josha Lapor	- popular to	- 116	6598 JK	1042015
	Operator (print)	Signature) Z#	Initials	Date
	lina Aguirre	Atue Xan	124	mest	1042615
	Operator (print)	Signature	Z#	Initials	Date
		1	/	/	/
	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
9.	1[2] Reviewed by:				
		/	/	/	/
	SOM or designee (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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TA-54 AREA G TA-54-375 CELL 3 NITRATE SALT TRU WASTE CONTAINER DAILY TEMPERATURE DATA SHEET

6.[6] Date: From <u>042015</u> to <u>047615</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>094</u>	Start Time: 1003	Start Time:	Start Time:	_ Start Time:	Start Time:	Start Time:
TA-54-375 Cell 3							
Calibrated Infrared	Brand: Pluke	Brand: Fluce	Brand:	Brand:	Brand:	Brand:	Brand:
Thermometer	Model: 561	Model: 56(Model:	Model:	Model:	Model:	Model:
(4.2.1[1][B])	Cal. Due Date: 10 1215	Cal. Due Date:061215	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:
9	File Number 10 1916	File Number 161916	File Number	File Number	File Number	File Number	File Number
Ambient Temperature (6.[7])	54.4 °F	56.8°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])	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	56.2	57.6					
69645	56.3	57.7					
94068	56.4	57,5					
93605	56.1	57.3					
69548	56.1	57.1					
69604	56.3	57.6					
LASB50529	55.5 Or.	18 57.8					
LASB50418	85.956,6°	58.2					
69036	500 59,150	57.2					
LASB50451	55.9	57.8					
69559	55.9	57.1					
LASB50448	57.9	56.9					
87823	55.9	56.8					
87825	15.7	56.7		Q.			
87826	55.4	56,6					
87827	55.4	56.7					

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6.[6] Date: From 642015 to 042615

	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 3 (con	tinued)						
Ambient Temperature (6.[13])	53 1 4 ovar	56.5°F	°F	°F	°F	°F	°F
End Time (6.[14])	0947	1007					
6.[14]	Operator: Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:

6.[2] Comments:			
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Revision: 6 Effective Date: 03/26/15

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6	[18] Performed by:	, ,					
	Ting Aquirre	the Ar		menn	DA	14-20-18	<i>-</i>
	Operator (print)	Signature		Z#	Initials	Date	_
	Joskus/ aper	16 bed	a He	+11657	BI SH	104201	5
- 3	Operator (print)	Signature		Z#	Initials	Date	
	ling Hymre	Dun 1	Leece	Lhygr	VOL	04211	5
	Operator (print)	Signature	0	Z#	Initials	Date	
		/		/	/	/	
	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	_
9.	1[2] Reviewed by:						
		/		/	/	/	
	SOM or designee (print)	Signature		Z#	Initials	Date	_

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

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Effective Date: 03/26/15

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

6.[6] Date: From 042115 to 042115 Location: 375

	G	g g:			1									
	Start Time: 6,[6]	Start Time: 6,[6]	Start Time:	Start Time:	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6,[6]	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
	10645	0724	0835	0926	1029	1130	1229	1325	1419	1526	1629	1222	6.[6]	6.[6]
Calibrated Infrared	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:
Thermometer	Model:	Model:	Model:	Model: A	Model: A	Model:	Model:	Model:	Model:	Model:	Model:	Model:	Model:	Model
(4.2.1[1][B])	Cala Due Date:	Cal Due Date:	Cal. Due Date:	Ca Que Date:	Cll. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Duo Date:	Cal. Due Date	Cal Due Dale	Cal. Due Date:	Cai. Due Date:	Cal Due Date:	Cal. Due Date:
	File Number	File Number	File Number	File Number	File Number	File Number	File Number	P \	N		2	10		
	- The Humber		The (volitibe)	The Number	File Number	riie Number	rile Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number
Ambient Temperature	52.6	52.0	51.6	53. VF	55.7°F	59.5	62.0F	61. 9°F	62.7	60.0F	60.3°F	00		
(6.[7])		3610	فباد		23.4.	7 125	6010F	10 L	900, F	60.0F	00, 5%	59.5°F	\ °F	°F
Container ID #	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)
(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])	(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])	(6.[8]/6.[9])
68685 TI		52.34	52.33	53.57	56.17	59.42	61.92	61.84	62,46	1 / 1	68 60.96			//
68685 T2				53.11	55.62	58.63		60.97	61.61	60.26		59.87		
50522 14	52,16	53.51	52.96		55.7	58.14		60.28		59.13	59.13	58.67		V+
50522 TS	5 3:53	53,22	52.75	53.8	55.78	58.19	60.18	60.22	60.76	59.25	59.26	58.85	·	\'
<u> </u>														
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Page 2 of 3

6.[6] Date: From 042115 to 042115 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])				
							(-)(-)(-)(-)	(0.[0].0.[3],	(0.[0], 0.[5])	(5,[5],0,[7])	(0,[0],0,[5])	(0.[0].0.[2])	(0.[0]0.[9])	(0.[0]/0.[2]
							1							
						1) /							
						XV	HA						\	
							7						<u> </u>	
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Ambient		and the second												
remperature 6.[13])	526	51.9F	5118	53.F	55.8F	59.5	62.0	61.9°F	627	60.0F	60.3F	59,5F	°F	-\or
	0645	0730	0826	0927	1030	1131	1230	1326	1420	1527	1630	1723		
6.[14]	Operator:	operator	Operator:	Operator:	Operator:	(perato)	Operator:	Operator:	Орега от:	perator	Operator:	Operator:	Operator:	Operator:
	Gperalor:	Operator	Operator:	Operator:	Operator:	Operator:	operator:	Operator:	Oper (1967)	Operator	Operator: Operator:	Operator	Operator:	Operator:
	10	1 40	22	***	- XX	1	Ser	301	308	700	781	187		

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Initials Date

UET							Page:	39 of 40	Per
				ATTACHME Page 3 of	<u>CNT 6</u> 3				
6.[6] Date: From	042115 to 046	Loca	ntion: 375						
6.[2] Comments: —									
	A-924			h/n			-		
				2//					
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Joshuala	22. Jolles	Jus 1165%	Initials Date Date		/		/		
Operator (print)	Sygnature	Z#	Initials Date	Operator (print)	Signature	Z#	Initials Date		
Operator (print)	Signature	Z# /	Initials Date	Operator (print)	Signature	Z# 1	Initials Date		
Operator (print)	Signature	A Z#	Initials Date	Operator (print)	Signature /	Z# 1	nitials Date		
Operator (print)	Signature /	Z#	Initials Date	Operator (print)	Signature /	24	nitials Date		
Operator (print)	Signature	Z#	Initials Date	Operator (print)	Signature /	Z# 1	nittals Date		
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9.1[2] Reviewed by:

SOM or designee (print)

Signature

Z#

Initials Date

Operator (print)

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Revision:

Effective Date: 03/26/15

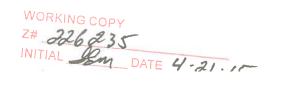
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ATTACHMENT 6
Page 1 of 3

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

6.[6] Date: From 4-21-15 to 4-22-15 Location: 375

	Start Time:	Ctout Time	Eart Till	G T'	N a									
	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6,[6]	6.[6]	Start Time: 6,[6]	Start Time: 6,[6]	Start Time: 6,[6]	Start Time: 6.[6]	Start Time: 6.[6]
0.17	1829	1925	2026	2128	2225	3332	0023	DIZZ	2250	0358	CHAS	0524	\	0.[0]
Calibrated Infrared	Brand:	Brand:	Brand:	Brand:	Brand:									
Thermometer	Model:	Model: NA	Model:	Model:	Model:	Model: NA	Model:	Model:	Model:	Model:	Model:	Model:	Model:	Model:
(4.2.1[1][B])	Cal. Due Date:	Cal. Due Qate:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:							
	File Number				l									
A 11				1	- Trainber	The rumber	The ivalider	File Number	rile Number	File Number	File Number	File Number	File Number	File Number
Ambient Temperature	58.90°F	57.90°F	58.10°F	56.90 °F	56.0 °F	55.60°F	55.70°F	56.10 °F	56.30°F	EE 2000	Ellan.	C1 10-		
(6.[7])			00.70	30-10	0010	22.60	20170 F	36.10	2 6100	55.30°F	54.30°F	53.60°F		°F
Container ID # (6.[8]/6.[9])	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])	(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])	1 (6,[8]/6.[9])
69695 TI	59.30	28.50	58.20	54.90		55.60	55.70	56.10	56.30	55.30	54.40	53.70	\\	174
68685 12		57.90	57.70	54.30	53.5	22: 50	55.30	\$5.70	55.90	54.80	54.0	53.30		
50522 TY		57.50	57.70	56.90	56.20	55.80	55.90	56.10	56.30	55.40	54.90	54.30		
50522 15	58.30	57.50	57.70	5670	56.0	55.70	55.80	54.10	56.30	55:40	54.70	54.20		
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6.[6] Date: From 4-21-15 to 4-22-15 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])
						nA							\n(,	4
						100							\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
			52										\	
Ambient Temperature	5730°F	57.90°F	58.10 °F	54.90°F	56.0 °F	55.60°F	55.70°F	56.10F	56.30 of	55 . <u>30</u> °F	54.40 °F	53.60°F	°F	oF.
(6.[13]) End Time (6.[14])	1829	1924	2026	9129	2225	3332	0024	0126	0226	0328	0426	0524		
6.[14]	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:	Operator:

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			ATTACHMEN Page 3 of 3					
6.[6] Date: From 4	-21-15 to 4-22-1	5 Location: 375						
6.[2] Comments:								
			····					
	<u> </u>		NA					-
		li						
6.[18] Performed by:								
John Quidue	Friells	1190571510 14-21-15			/	/	/	
Operator (print)	Stignature	Z# Initials Date	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	Operator (print)	Signature	Z#	Initials	Date	
9.1[2] Reviewed by:	1 4 1							