From: Haagenstad, Mark P

Sent: Wednesday, May 06, 2015 5:12 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; Branch, Yvette S; Guffee, Debi; Armijo, Karen (CONTR); Saladen, Michael Thomas; <a href="mailto:epccat@lanl.gov">epccat@lanl.gov</a>; Vigil-Holterman, Luciana R; Juarez, Catherine L; Diaz, Tammy Subject: Daily Technical Submission - May 6, 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 and April 27, 2015 letters from NMED regarding *Modification to May 19, 2014, Administrative Order*; and Section IX of the April 21, 2015, *LANL Nitrate Salt-Bearing Waste Container Isolation Plan, Revision 3*.

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

## May 6, 2015

#### **LANL Technical Update:**

- Location of Nitrate Salt-Bearing Wastes
  - o Remediated nitrate salt-bearing waste containers (55 SWBs and 4 POCs).
    - All containers remain in the 375 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.
      - May 6, 2015 HSG data attached.
        - o H<sub>2</sub>, CO, CO<sub>2</sub> and N<sub>2</sub>O.
  - Other containers:
    - A minimum of once per month HSG sampling will be conducted.
      - To date in May, LANL has conducted HSG sampling on 35 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 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, May 7, 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 <sub>2</sub> and LFL analytes).	LANL		Complete June 11, 2014
11.	Discuss potential sampling of HSG for NO <sub>x</sub> .	LANL		Complete June 16, 2014

	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 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.	LANL		Complete July 9, 2014 (Letter sent addressing items 1-4 and 6-9 of the email request) July 17, 2014 (Letter sent with updated spreadsheet) August 7, 2014 (First submittal in response to item 5) August 14, 2014 (Letter addressing items 2 & 8 - Second submittal in response to item 5) August 18, 2014 (Third submittal in response to item 5) August 21, 2014 (Fourth submittal in response to item 5) August 27, 2014 (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 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 1, 2014 (Twelfth submittal in response to item 5) October 16, 2014 (Twelfth submittal in response to item 5) October 23, 2014 (Twelfth submittal in response to item 5) October 27, 2014 (Fifteenth submittal in response to item 5) October 27, 2014 (Fifteenth submittal in response to item 5) October 27, 2014 (Fifteenth submittal in response to item 5) October 28, 2014 (Fifteenth submittal 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) October 28, 2014 (Fifteenth submittal in response to item 5) October 27, 2014 (Fifteenth 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 <sub>2</sub> , 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 <sup>rd</sup> Q 2008).	LANL		Complete July 21, 2014
29.	NMED requested a copy of lessons learned	LANL		Complete August 11, 2014
30.	NMED request regarding empty drum sampling presentation.	LANL	Presentation is a pre- decisional draft/working document not for external release	August 25, 2014
31.	Respond to NMED email request dated 8/12/2014 for information associated with the nitrate salt-bearing waste containers.	LANL		Complete September 11, 2014
32.	NMED request regarding technical presentation.	LANL	Presentation is a pre- decisional draft/working document not for external release	August 25, 2014
33.	NMED request regarding literature review of catalytic reactions.	LANL	Literature review is a pre-decisional draft/working document not for external release	August 25, 2014
34.	LANL requested to schedule a meeting with NMED on remediation planning and schedules.	LANL / NMED		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 201-250 on December 19, 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		Complete. Included with April 24, 2015 Response to Request for Information.
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.

	68685				SB50522				68624			
Date	H <sub>2</sub> ppm	CO ppm	CO <sub>2</sub> ppm	N <sub>2</sub> O ppm	H <sub>2</sub> ppm	CO ppm	CO <sub>2</sub> ppm	N <sub>2</sub> O ppm	H <sub>2</sub> ppm	CO ppm	CO <sub>2</sub> ppm	N <sub>2</sub> O ppm
05/06/15	137	350	8650	2065	2839	451	35655	1082	37	84	1322	166

	69015				69633				69635			
Date	H <sub>2</sub> ppm	CO ppm	CO <sub>2</sub> ppm	N₂O ppm	H <sub>2</sub> ppm	CO ppm	CO <sub>2</sub> ppm	N₂O ppm	H <sub>2</sub> ppm	CO ppm	CO <sub>2</sub> ppm	N <sub>2</sub> O ppm
05/06/15	45	47	1010	88	307	375	5653	779	180	225	3609	179

	69637				69638				69639			
Date	H <sub>2</sub> ppm	CO ppm	CO <sub>2</sub> ppm	N <sub>2</sub> O ppm	H <sub>2</sub> ppm	CO ppm	CO <sub>2</sub> ppm	N <sub>2</sub> O ppm	H <sub>2</sub> ppm	CO ppm	CO <sub>2</sub> ppm	N₂O ppm
05/06/15	108	278	2805	600	483	525	6491	696	152	150	4591	215

	69644						
Date	H <sub>2</sub> ppm	CO ppm	CO <sub>2</sub> ppm	N <sub>2</sub> O ppm			
05/06/15	169	265	3889	921			

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### **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>5.4.15</u> to 5.10.15

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
	Start Time: 0913	Start Time:					
TA-54-231						8 1 1 11	
Calibrated Infrared	Brand: Fluke	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:
Thermometer	Model 561	Model:	Model	Model:	Model:	Model:	Model:
(4.2.1[1][B])	Cal. Due Date: 72915	Cal. Due Date:					
	File Number <u>101974</u>	File Number					
Ambient Temperature (6.[7])	<u>58.4</u> %	°F	°F	°F	°F	°F	°F
Container ID#	Temp (°F) (6.[8]/6.[9])						
S818435	57.2			1/			
S802833	56.8						
S801676	57,1						
S816810	55.8		·				
70069	<i>५५</i> .५						
S822844	57.4						
S825879	85.7						
S793724	55.8		_				
S813545	56.2						
S822713	56.9						
S802739	57.0						
69907	56.9						
S804995	57.1						
S816434	58.2						

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6.[6] Date: From 5.4.15 to 5-10.15

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Container ID #	Temp (°F) (6.[8]/6.[9])						
TA-54-231 (continued							
S805289	578						
S862888	5711						
70072	57.0						
S823184 Q	かんちょう シア・ト						
S822599	51,1						
69904	56.3						
S805051	56.0			1			
S864213	5519			W 17			
S853714	55.7						
S803078	55,6						
S825878	59,9						
S823124	CON-15 6-5- 56.3						
S804948	52.5						
S813385	57.4	_					
S842446	55.6		25				
Ambient Temperature (6.[13])	58.7°F	°F	°F	°F	°F		°F
End Time (6.[14])	0922						
6.[14]	-	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:
	Operator:						

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6.[6] Date: From 5.4.15 to 5.10.15 6.[2] Comments: <u>5/5/15</u> for fod and Dave Frederici : 570p performing inspections of unkernediated niTrate Salt 6.[18] Performed by:

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9.1[2] Reviewed by:

Gackie Romer Tackie Romero SOM or designee (print)

1187066 / JR 15-5-15

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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 5.4.15 to 5.10-15

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	i	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
		Start Time: 094	Start Time:	Start Time:	Start Time:	Start Time;	Start Time:	Start Time;
TA-54-375 Cell 1		DEFENSE SEE N		X 11				
Calibrated Infrared		Brand: Clube	Brand Fluke	Brand:	Brand:	Brand:	Brand:	Brand
Thermometer	2.0	Model 561	Model 561	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 <u>[61915</u>	File Number	File Number	File Number	File Number	File Number	File Number
Ambient Temperat	ure	56.5°F	54,0°F	°F	°F	oF.	oF	°F
Container ID	#	Temp (°F) (6.[8]/6.[9])	5 <sup>5</sup> (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])				
68685		56.3	A 54.4 54.4					
	68540	56,5	54.7					
LA00000070503	68553	56.6	5416					
69445		57.3	54.9					
69618		56.4	55,2					
69013		57.0	55.0					
LASB50522	2	57.6	56.2					
LASB50452		57.3_	55.9					
LASB50431	1 9	15 m 1 3, 3 57.3	55.7					
LASB50069	9	57.4	55,4					
LASB50073	3	57.3	55.7					
69636		513	55.8					
69616		572	55,8					4.7
69417		57.3	55.9					

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6.[6] Date: From 5-4-15 to 5-10-15

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday		
Container ID #	Temp (°F) (6.[8]/6.[9])								
TA-54-375 Cell 1 (continued)									
69620	57.4	56. D							
69520	57.5	55.9							
69641	517	56.2							
69298	58,0	56.4			E				
LASB02203	57.6	55.9							
Ambient Temperature (6.[13])	56.7 °F	54.3 of	oF	°F	°F	•F	of		
End Time (6.[14])	0845	0904							
6.[14]	Operator: CA Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:		

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6.[6] Date: From 5.4.15 to 5.10.15

SOM or designee (print)

Signature

18] Performed by	Arm Los	124427	W	0,50415		1	/		/
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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 54.15 \_\_\_ to 5.10.15

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday 6.[6]
	6.[6] Start Time: 0 84 6	6.[6] Start Time <b>98</b> 0 5	6.[6] Start Time:	6.[6] Start Time:	6,[6] Start Time:	6.[6] Start Time:	_ Start Time:
TA-54-375 Cell 2							
Calibrated Infrared Thermometer (4.2.1[1][B])	Brand: 561  Model: 561  Cal. Due Date 612  File Number 612	Brand: <b>L'UL 2</b> Model: <b>56</b> Cal. Due Date <b>612-15</b> File Number <b>1019 12</b>	Brand:  Model:  Cal. Due Date:  File Number	Brand:  Model: Cal. Due Date: File Number	Brand:		Brand:  Model: Cal. Due Date: File Number
Ambient Temperature (6.[7])	57.7 °F	<u>56.6</u> °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	57.5	56-8					
68638	57.6	56.5					
69615	57,5	56.6					
69635	58.7	57.2					
69642	57.8	56.6		<u> </u>			
69630	57.8	56.8					
69633	58.\	57.2					
68430	57.8	56.8					
68631	57,6	56.3					
69634	5719	56.9					
68567	52 6	56.7	_		0.		
ابت 94227	57453 57.9	56.7	_				
LASB50442	58.3	57.2					
69644	58.1	57.3					
LASB50443	58.0	57.1					
69638	58.2	57.7					

INITIAL &c DATE 5-4-15

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## ATTACHMENT 4 Page 2 of 3

6.[6] Date: From <u>5-4-15</u> to <u>5-10-15</u>

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Container ID #	Temp (°F) (6,[8]/6,[9])	Temp (°F) (6.[8]/6.[9])					
ΓA-54-375 Cell 2 (con	tinued)						A DX TX X
68624	58.2	57.5					
68507	58.3	57.6				-	
69568	57.8	57.1					
69553	57.7	54.9					
69598	578.0	51.0					
LASB50559	59,4	57.0					
69015	58.4	57.6					
69639	58.2	57.9					
69637	59.0	57,3		111			
Ambient Temperature 6.[13])	57.8°F	56.7 °F	°F	°F	°F	°F	eF
End Time (6.[14])	0850	0807					
6.[14]	Operator: 4	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:

6.[2] Comments:		 	 
	- MS	- 1771	
-	-		

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Revision:

Initials Date

Effective Date: Page:

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# ATTACHMENT 3 Page 3 of 3

6.[6] Date: From <u>5.4</u>	10 3 70 3	<del>'</del>					
6.[18] Performed by			G 14	M 050415		1	/
Operator (print)	Signature O	Z#	Initials	DADVIS	Operator (print)	Signature /	Z# /
Operator (print)	Signature	<i>V9152</i> 2#	Initials	Date	Operator (print)	Signature /	Z# /
Operator (prior)	Alina Age	2#	Initials	Date	Operator (print)	Signature /	Z# /
Operator (print)	Signature	<i>                                     </i>	Initials	1 5/5/15 Date	Operator (print)	Signature /	Z# /
Operator (print)	Signature	Z#	Initials	Date	Operator (print)	Signature /	Z# /
Operator (print)	Signature	Z#	Initials	Date	Operator (print)	Signature /	Z# /
Operator (print)	Signature	Z#	Initials	Date	Operator (print)	Signature	Z#
9.1[2] Reviewed by:							
	1		1	/			
SOM or designee (print)	Signature	Z#	Initials	Date			

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Revision: 6

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## ATTACHMENT 5 Page 1 of 3

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

6.[6] Date: From 5.4.15 to 5.10.15

					· · · · · · · · · · · · · · · · · · ·		
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6]	6,[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
	Start Time: <u>6 836</u>	Start Time: <u>0756</u>	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
TA-54-375 Cell 3							
Calibrated Infrared	Brand Elule	Brand Pluke	Brand:	Brand	Brand:	Brand:	Brand;
Thermometer	Model: 561	Model: 561	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:
124	File Number 101916	File Number 01916	File Number	File Number	File Number	File Number	File Number
Ambient Temperature (6.[7])	59.1 °F	<u>56.9</u> ∘F	°F	°F	°F	of	°F
Container ID #	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])				
69519	58.3	57.7					
69645	59.6	57.9					
94068	58.9	58.4					
93605	57.0	58.2					
69548	58,7	58.5					
69604	<b>5</b> 8.9	58.1					
LASB50529	58.9	5 g.1					
LASB50418	58.4	58.6					
69036	58.9	58.0					
LASB50451	58.6	57.8					
69559	58.7	58.8			1		
LASB50448	59,6	58.2					
87823	58.6	57.4					
87825	58.3	51.3					
87826	89.1	58.0					
87827	59.0	5811					<u></u>

\_\_ DATE 5.4.15

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# ATTACHMENT 5 Page 2 of 3

6.[6] Date: From <u>5-4-15</u> to <u>5-10-15</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])				
TA-54-375 Cell 3 (con	tinued)						
Ambient Temperature (6.[13])	58.6°F	5 €°F	°F	°F	°F	°F	°F
End Time (6.[14])	0848	6759					
6.[14]	Operator:						

6.[2] Comments:			
ATC		46 18 4	

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6.	[18] Performed by: 7	$\prec$ 1			
	Tima Hours	Hum Agoing	Muga	1994	050415
	Operator (print)	Signature	Z#	Initials	Date
	Lun montor	1	1/9/52	6/40	15/4/15
	Operator (print)	\_Signature	Z#	Initials	Date
	liva Aguirra	then taline	/ኒጊኒቄረገ	7AA	1050515
	Operator (print)	Signature (	Z#	Initials	Date
	Lun Montoga	1	19158	61-0	15/5/15
	Operator (print)	Signature	Z#	Initials	Date
		1	1	1	10 10
	Operator (print)	Signature	Z#	Initials	Date
		1	1	1	/
	Operator (print)	Signature	Z#	Initials	Date
	2	1	1	1	/
	Operator (print)	Signature	Z#	Initials	Date
9.	1[2] Reviewed by:				
		1	1	1	1
	SOM or designee (print)	Signature	Z#	Initials	Date

	/	/	/ /
Operator (print)	Signature	Z#	Initials Date
17	1	/	1 1
Operator (print)	Signature	Z#	Initials Date
	1	/	1 1
Operator (print)	Signature	Z#	Initials Date
		/	1 1
Operator (print)	Signature	Z#	Initials Date
	1		1 1
Operator (print)	Signature	Z#	Initials Date
	/	1	1 7
Operator (print)	Signature	Z#	Initials Date
	1	/	1 1
Operator (print)	Signature	<b>Z</b> #	Initials Date

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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 5/5/15 to 5/5/15 Location: 375 Start Time: Start Time: Start Time: Start Time: Start Time: Start Time: Start Time; Start Time: 0126 6,[6] 6.[6] 6.[6] 6.[6] 6.[6] 6.[6] 6.[6] 6.[6] 6.[6] 6.[6] 6.[6] 6.[6] 1023 082 2922 1625 1227 Calibrated Brand: Brand: Brand: Brand: Infrared Model: Model: Thermometer (4.2.1[1][B]) Call Dic Date: Oul Dud Date: Cal. Duc Date: Cal. Data Date: Cal. Due Date: Cal. Due Date: File Number File Numbe File Number File Number Ambient 55.49 34.15F 54.42 56.49 59.89 63.05 60.79 F 6190 567 F Temperature 57.23 FF 62.32°F øF. (6.[7])Container 1D# 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]) 54,32 54.59 55.84 56.27 62.16 62.89 10.72 74.21 56.63 57.56 59.78 62.10 56.30 59.83 59.19 61.39 56.82 55.11 56.78 56.97 59.06 60.79 60.10 57.21 61.55 55.05 56.83 60.91 55.26 57.25

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## ATTACHMENT 6 Page 2 of 3

6.[6] Date: From <u>5/5/15</u> to <u>5/5/15</u> Location: <u>3 > 5</u>

Container ID # (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Тептр (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])										
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										12				<del>\</del>
Ambient Temperature (6.[13])	54.05	54.16	<u> </u>	55.5¢	56.57	56.6A	<i>57</i> .25°F	59.93	<i>\$2.34</i> °F	63.08	60.77 of	61.92	eF	
End Time (6.[14])	0645	0727	0823	0923	1024	1125	1228	1323	14.18	1522	1626	1720		
6.[14]	Operator: Operator:	Operator: Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:

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Initials Date

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			ATTACHM Page 3 o				
6.[6] Date: From <u>5</u>	15/15 to 5/3	5-/15 Location: <u>3</u>	75			E.3	
6.[2] Comments.							
			A > /		······································		
				7			_
6.[18] Performed by:	Ce Mus Los.	ine Mygn Hoso		1	1	1 1	
Operator (print)	Signature	Z# Initials Date  V9/5261 - 15/3	Operator (print)	Signature	Z#	Initials Date	
Operator (print)	Signature	Z# Initials Date		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	
	1	4111	0	Signature	- Jan	Initials Date	
Operator (print)	Signature /		0-1-6-1-8		Z#	4 /	
Operator (print)	Signature	Z# Initals Date	Operator (print)	Signature	Z.H	Initials Date	

Operator (print)

Signature

9.1[2] Reviewed by:				
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SOM or designee (print)	Signature	Z#	Initials	Date

Signature

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Initials Date

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Operator (print)

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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	rom5-05-	15 105-0	615	Location:	375	<u> </u>								
	Start Time: 6.[6] /825	Start Time: 6.[6] 1927	Start Time: 6.[6] 2025	Start Time: 6.[6] 21.26	Start Time: 6 [6] 2228	Start Time: 6 [6] 2332	Start Time: 6.[6] 0029	Start Time: 6 [6] 0 / 3 O	Start Time: 6.[6] 02.25	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6] 05.26	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer	Brand: Model:	Brand: Model:	Brand:	Modul: 7	Wrand:	Brand:	Brand:	Brand: Mindelpal A	Brand: Model:	Brand:	Brand:	Brand:	Brand: Model:	Brand: Model:
(4.2.1[1][B])	Cal. Dub Date:	Cal. Due Date:	Cal. Dhe Date:	Cal. Due Date:	Cal. Due Mate:	Cal. Dhe Date:	Molel: Cat. Duo Date:	Cal. Dua Date:	Cal. Due Date:	Motel: MA	Model: Cal. Due Date:	Cal, Due Nate:	Cal. Due Date;	Cal. Due Date:
Auditor	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number
Ambient Temperature (6.[7])	59.87°F	58.11°F	56.47-F	<u> </u>	52.85 °F	<u>51.97</u> °F	<i>51.70</i> F	51.25 F	<i>50.88</i> °F	50.61 °F	50.35°F	<i>50-3</i> ८ ⁴ғ		°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])
6868571	60.02	58.07		54.19	53.1/	52.22	51.93	57.53	51.20	50.84	50.60	50.64	\	
6968572	59.55	57.65		54-98	<i>52.75</i>	52.07	51.79	51-35	51.07	50.78	50.52	50.31		AI
5052274	59.61	58.08				53.24	53.0	52.63		52.02		5/.77		<u> </u>
5052275	59.61	57.98	56,65	54.66	53.82	53.08	5282	52.48	5219	51.90	51.65	51.63		
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6.[6] Date: From 5-05-15 to 5-06-15

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Location: 37.5

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])
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			<u> </u>											\-
Ambient Temperature (6.[13])	59.80°F	58.//°F	56.47°F	5378°F	52.84 °F	5197°F	51.70°F	51.25 °F	50.88°F	50.61 °F	50.34°F	5036 ·1	of	o£
End Time (6.[14])	1826	1927	2025	2127	2228	2332	51.75	0/30	0225	0330	0439	0527		
6.[14]	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator	Operator:	Operator:	Operator:	Operator:	Operator:	Operator	Operator
	Operator:	Operator:	Operator:	Operator:	Operator	Operator	Operators	Operator	Operator	Operator	Operator:	Operator	Operator:	Operator;
6.[14]			Operator: Operator: Ge	Operator: CAC	Operator: Operator: Operator:	Operator	Operator: Operator: Operator: OFF.	Operator:	Operator:	Operator: Operator: Operator:	Operator: Operator:	Operator:	Operator:	100

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<u> </u>	-05-15 to 5-06-	Location: 37	<del></del>		18			
[2] Comments:								
		n.						
		TO EN	5-6-15-5					
	<del></del>				11610	-		
[18], Performed by	126/			1	7	1 1		
Operator (print)	Signature	1/123671 WQC/5-5-1.5   Z# Initials Date	Operator (print)	Signature	Z#	Initials Dat	le ·	
Gerald Ksp.	15x1 21/2	11209761GE 105051	15-	1		1 1	_	
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	2.4	Initials Dat	le	
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Dat	le	
	Signature	1 / Initials Date		Simulan	4 /	1 1		
Operator (print)		Z# Initials Date	Operator (print)	Signature	Z#	Initials Dat	le	
Operator (print)	Signature	Za filliais Daic						
Operator (print)	1	/ / /	Onerator (print)	Signature	7.0	Initials Dat	le ·	
	Signature	/ / /	Operator (print)	Signature /	ZII	Initials Dat	le	
Operator (print)  Operator (print)	Signature	Z# Initials Date	Operator (print) Operator (print)	Signature / Signature	Z#	Initials Dat	_	
Operator (print)	1	/ / /				1 1	ie .	

Signature SOM or designee (print)

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7.# Initials Date