From: Juarez, Catherine L

Sent: Tuesday, March 10, 2015 7:52 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; Vigil-Holterman, Luciana R; Alexander, Rick A; Baumer, Andy; Martinez, Saundra; Sauer, Selena Z; Schreiber, Arleen Thorn; Maestas, Pamela Therese; Hargis, Kenneth Marshall; Juarez, Catherine L; Cabbil, Cheryl Denise; Young, Steven L; Erickson, Randy; Funk, David John; Alexander, Rick A; Frederici, Dave; Juarez, Catherine L; Robinson, Bruce Alan; Lansing, Michael Alan; Tymkowych, John M; Diaz, Tammy; Branch, Yvette S; Guffee, Debi

Subject: Daily Technical Submission - March 10,, 2015

Sent on behalf of Mark Haagenstad.

Attached is the written daily technical submission for today. The Permittees are submitting the attached information pursuant to: Section 19 of the May 19, 2014, *Administrative Order;* the July 10, 2014 letter from NMED regarding *Modification to May 19, 2014, Administrative Order;* and Section IX of the September 19, 2014, *LANL Nitrate Salt-Bearing Waste Container Isolation Plan, Revision 2.*

Please contact Mark at 505-665-2014 or mph@lanl.gov if additional information would be helpful.

Catherine Juarez, CHMM, REM Los Alamos National Laboratory Environmental Compliance Group cjuarez@lanl.gov 505-667-4961

NMED / LANL Technical Summary

March 10, 2015

Participants:

- New Mexico Environment Department: Tim Hall and Siona Briley.
- LANL Los Alamos Field Office: Gene Turner.
- LANL Los Alamos National Security: Alison Dorries, Mark Haagenstad and Cathy Juarez.

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.
 - March 10, 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 March, LANL has conducted HSG sampling on 39 SWBs.
 - o March 10, 2015 HSG data attached.

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 (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 occurring.

Other:

Next Call: Thursday, March 12, 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 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 (Thirteenth submittal in response to item 5) October 23, 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 (Sixteenth 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 (Sixteenth submittal in response to item 5)

	Requested Information	Actionee	Status	Completion Date
14.	NMED will review the Round Sheets (provided in June 11 summary) and inform LANL if these should be attachments to the Revised Plan, or if they fall under the provision in Section I of the Revised Isolation Plan and their identification during this technical call is sufficient.	NMED	NMED has reviewed Round Sheets – no comments / direction at this time. NMED will address any comments in their formal response to Revised Container Isolation Plan.	Complete June 23, 2014
15.	NMED has requested 'copies of any waste processing, treatment, characterization stop orders issued since Feb 14, 2014.'	LANL		Complete June 13, 2014 (Included w/ daily summary) June 16, 2014 (Discussed current TA-54 & WCRRF operations)
16.	NMED requested information on the location of drums 68327 and 68328. Request made June 14.	LANL		Complete June 14, 2014
17.	Update on LANL efforts – including LANL teams. (On June 20 call, LANL offered to schedule an update meeting).	LANL / NMED		Complete July 2, 2014
18.	Neutralizer use in association with container S855793 (parent of 68660 and 68685).	LANL		Complete June 25, 2014
19.	List of nitrate salt-bearing waste containers that LANL records indicate contain absorbed liquids with the same neutralizer, as discussed during June 25 technical call.	LANL		Complete September 30, 2014 (with August 26, 2014 response)
20.	Schedule follow-on update on LANL efforts – including teams.	LANL / NMED		Complete August 14, 2014 (Meeting held)
21.	NMED requested information on document approval / review (as discussed on July 3 call).	LANL		Complete July 29, 2014
22.	What analyses will be conducted on samples taken from empty drums that previously contained nitrate salt-bearing waste.	LANL		Complete July 7, 2014
23.	NMED requested the following information on cemented waste containers generated from TA-55, that are currently stored above-ground at Area G: container id number; location; form (cans or monoliths); and type of concrete. Additionally, NMED requested information on pH adjustment during waste generation process, and information on anticipated pH of free liquids (and rationale).	LANL		Complete July 17, 2014 (Letter sent w/ information) July 18, 2014 (Meeting held)

	Requested Information	Actionee	Status	Completion Date
24.	NMED requested the procedure for sampling empty parent drums that previously contained nitrate salt-bearing waste.	LANL	EP-AREAG-WO-DOP- 1245 is included in Enclosure 1 to LANL's July 3, 2014 Response to Request for Information on Management of Waste at LANL.	Complete July 8, 2014
25.	NMED requested an additional discussion on a future technical call regarding CO ₂ , including data.	LANL		Complete August 14, 2014 (Meeting held)
26.	NMED requested additional discussion on CIN-01 waste containers and absorbent, including confirmation and extent of use.	LANL		Complete July 18, 2014 (Meeting held)
27.	NMED requested historic analytical information on pH of liquids associated with gypsum cemented waste.	LANL		Complete August 7, 2014
28.	NMED requested link to pdf of Actinide Quarterly edition (3 rd Q 2008).	LANL		Complete July 21, 2014
29.	NMED requested a copy of lessons learned	LANL		Complete August 11, 2014
30.	NMED request regarding empty drum sampling presentation.	LANL	Presentation is a pre- decisional draft/working document not for external release	August 25, 2014
31.	Respond to NMED email request dated 8/12/2014 for information associated with the nitrate salt-bearing waste containers.	LANL		Complete September 11, 2014
32.	NMED request regarding technical presentation.	LANL	Presentation is a pre- decisional draft/working document not for external release	August 25, 2014
33.	NMED request regarding literature review of catalytic reactions.	D request regarding literature review of LANL Literature review		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 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. 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	Email sent February 17, 2015. Letter to follow.	
51.	NMED requested copies of any procedures regarding cemetation in bags.	LANL	In progress	
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	In progress	

68685			SB50522				68430					
Date	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm
03/10/15	148	385	9932	2538	2224	497	38383	1149	160	204	3623	689

68507			68631					68638				
Date	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm
03/10/15	101	0	1275	60	15	0	246	51	13	0	361	0

69568			94227				SB50442					
Date	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm
03/10/15	104	125	407	412	32	0	209	414	146	287	3724	729

	SB50559							
Date	H ₂ ppm	CO ppm	CO ₂ ppm	N₂O ppm				
03/10/15	776	227	3520	197				

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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>3.9.15</u> to <u>3.15.15</u>

	Monday	Tuesday	Wednesday	T1 1	D.11	0 1	
	6.[6]	Tuesday 6.[6]	Wednesday	Thursday	Friday	Saturday	Sunday
	Start Time: 0825	Start Time:	6.[6] Start Time:	6.[6]	6.[6]	6.[6]	6.[6]
TA 54 221	Start Time. O6 27	Start Time.	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
TA-54-231							
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:7/29/15 File Number 101974	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:
	File Number 101919	File Number	File Number	File Number	File Number	File Number	File Number
Ambient Temperature (6.[7])	48.6 °F	°F	°F	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])
S818435	50.9			(==[=];==[=])	(0.[0]/0.[2])	(0.[0],0.[5])	(0.[0]/0.[2])
S802833	50.8						
S801676	51.7						
S816810	56.3						
70069	56.6						
S822844	57.1						
S825879	56.6						
S793724	56.8						
S813545	56.0						
S822713	54.3						
S802739	53.1						
69907	52.2						
S804995	52.8						
S816434	53.1						

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6.[6] Date: From 3-9-15 to 3-15-15

	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)				(-,[-],-,[-])	[(0:[0]/0:[7]/	(0.[0],0,(0])
S805289	52.9						
S862888	53.6						
70072	52.9						
S823184	54.0						
S822599	54.8						
69904	55.8						
S805051	56-2						
S864213	56.4						
S853714	56.7						
S803078	56.2						
S825878	56-1						
S823124	55.5						
S804948 .	53.6						
S813385	53.4						
S842446	53.7						
Ambient Temperature 6.[12])	50.3 °F	°F	°F	°F	oF	°F	°F
End Time (6.[13])	0832						
6.[13]	Operator: TR Operator: EC	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:

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o.[6] Date: From 3.7	15 to 3.15.15								
[2] Comments:									
.[17] Performed by:									
Jackie Romero	Gackie Romero	118706	6/JR	13-9-15		/	/	/_	/
Operator (print)	% ignature	Z#	Initials	Date	Operator (print)	Signature	Z#	Initials	Date
Eloyd, Coldova	160.) an	111418	8186	13-9-15		/	/		/
Operator (print)	Signature	Z#	Initials		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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Operator (print)	Signature		Initials	Date	Operator (print)	Signature	Z#	Initials	Date
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Operator (print)	Signature		Initials	Date	Operator (print)	Signature	Z#	Initials	Date
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Operator (print)	Signature	Z#	Initials	Date	Operator (print)	Signature	Z#	Initials	Date
.1[2] Reviewed by:									
	/	/	/	/					
SOM or designee (print)	Signature	Z#	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 3.9.15 to 3.15.15

		Monday	T 1		T			
		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
		Start Time: 1557	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
TA-54-375 Cell 1								
Calibrated Infrare	d	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: 6/12/15	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:		Cal. Due Date:
		File Number 101915	File Number	File Number	File Number	File Number	File Number	File Number
Ambient Tempera (6.[7])	ture		°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])				
68685		56.6					, t 3 t 3/	(0.[0],0.[0])
	68540	36.6						
LA00000070503	68553	56.8						
69445		57.1						
69618		56.5						
69013		56.9						
LASB50522	2	\$7.0						
LASB50452	2	57.0						
LASB5043	1	57.1						
LASB50069	9	56.6						
LASB50073	3	56.6						
69636		57.2						
69616		57.2						
69417		57.7						

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6.[6] Date: From 3.9.15 to 3.15.15

	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	itinued)			A STATE OF THE PARTY OF THE PAR		(0.[0], 0.[7])	(0.[0]/0.[7])
69620	\$1.0						
69520	57.5						
69641	57.5						
69298	57.8						
LASB02203	57.1						
Ambient Temperature (6.[12])	<u>56.3</u> ∘F	°F	°F	°F	oF		°F
End Time (6.[13])	1601						
6.[13]	Operator:	Operator:Operator:	Operator:	Operator:Operator:	Operator:Operator:	Operator:Operator:	Operator:

6.[2] Comments:	 			

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6.[6] Date: From 3.9.15 to 3.15.15

6.[17] Performed by:	:		1 11
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Operator (print)	Signatur	Z#	Initials Date
Joseph Der	- Alexander	11165	98/le 1030915
Operator (print)	Signature	Z#	Initials Date
		/	/ /
Operator (print)	Signature	Z#	Initials Date
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8.1[2] Reviewed by:

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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 3.9.15 to 3.15.15

	Monday	Tuesday	337-11	771	5.1		
	6.[6]	Tuesday 6.[6]	Wednesday 6.[6]	Thursday	Friday	Saturday	Sunday
	Start Time:[602_	Start Time:	Start Time:	6.[6]	6.[6]	6.[6]	6.[6]
The season of the	Start Time.	Start Time.	Start Time:	Start Time:	Start Time:	Start Time:	_ Start Time:
TA-54-375 Cell 2							
Calibrated Infrared	Brand: Fluke	Brand:	Brand:	Brand:	Brand:	Brand:	Brand:
Thermometer	Model: S6	Model:	Model:	Model:	Model:	Model:	Model:
(4.2.1[1][B])	Cal. Due Date: C1215 File Number 10912	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:		
Ambiant Tananan		File Number	r ne Number	File Number	File Number	File Number	_ File Number
Ambient Temperature (6.[7])	St. L of	°F	°F	°F	°F	°F	oF
Container ID #	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])				
LASB02198	57.0						(-,[-],-,[-])
68638	57.8						
69615	58,0						
69635	58.7						
69642	58.0						
69630	28.0						
69633	59.9						
68430	59.0						
68631	57.9		/				
69634	58.0						
68567	57.3						
94227	37.8						
LASB50442	58.7						
69644	58.5						
LASB50443	57.9						
69638	78.7						

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ATTACHMENT 4

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6.[6] Date: From 3.9.15 to 3.15.15

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Container ID #	Temp (°F) (6.[8]/6.[9])						
ГА-54-375 Cell 2 (сов	ntinued)						
68624	58.5						•
68507	58.6						
69568	58.0						
69553	57.3						
69598	57.3						
LASB50559	57.9						
69015	58.7						
69639	39.)						
69637	58.7						
Ambient Temperature 6.[12])	57.8 °F	°F	oF	°F	°F	°F	°F
and Time (6.[13])	1607						
6.[13]	Operator: Operator:	Operator:	Operator: Operator:	Operator:Operator:	Operator:Operator:	Operator:Operator:	Operator:Operator:

_6.[2] Comments:		

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	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	

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17] Performed by:	14-17	13/38	2, 1 39
Operator (print)	Signature	Z#	Initials Date
Joshuloper	1 John Joseph	/11657	8/ fer / 5309
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

6.[6] Date: From 3. 9.15 to 3.15.15

	/	/	/	/
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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ATTACHMENT 5

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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 3.9.15 to 3.15.15

	Monday 6.[6] Start Time: 455 \	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 3						Start Timo.	_ Start Time.
Calibrated Infrared Thermometer (4.2.1[1][B])	Brand: FUFE Model: 56 Cal. Due Date: G1115 File Number 10912	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[7])	51.7 °F	°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	38.4					(3,[2],3)	(0.[0], 0.[5])
69645	58.6						
94068	58.3						
93605	58.)						
69548	58.0						
69604	58.3						
LASB50529	38.7						
LASB50418	58.0						
69036	57.9						
LASB50451	57.9						
69559	51.9						
LASB50448	57.)						
Ambient Temperature (6.[12])	\$2.3 °F	°F	°F	°F	oF	°F	°F
End Time (6.[13])	1556						
6.[13]	Operator: Operator:	Operator:	Operator:	Operator:	Operator:	Operator:Operator:	Operator:

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6.[6] Date: From 3.	9.15 to 3.15.15								
6.[2] Comments:									
6.[17] Performed by:									
INDIMAS Y	of the	1236	36/4	1 3/9/15		/	/	/	/
Operator (print)	Signature	Z#	Initials	Date	Operator (print)	Signature	Z#	Initials	Date
Joshuloca	/ he hoods	116	578/ Der	1030915		/	/	/	/
Operator (print)	Signature	Z#	Initials	Date	Operator (print)	Signature	Z#	Initials	Date
	10	/	/_	/		/	/	_/	/
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	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 NITRATE SALT TRU WASTE CONTAINER HOURLY TEMPERATURE DATA SHEET

6.[6] Date: From <u>3-9-15</u> to <u>3-9-15</u> Location: <u>Dome</u> 375 Start Time: Start Time: Start Time: Start Time: Start Time Start Time: Start Time Start Time: Start Time Start Time: Start Time: Start Time: Start Time: Start Time: 07a7 1027 1 23 6.[6] 6.[6] 6,[6] 0926 7630 426 Calibrated 3 rand Brand: Infrared Mode Thermometer Mode Model. Cal Dua Date Cal. Due Date (4.2.I[I][B]) Cal. Due Pate Cal. Due Cal. Dur. Dan Cal. Due Pate Cal. Dut Date Cal. Due Date: Cal. Due Date File Number File Number File Numb File Number File Num Ambient 524Z 51.01 OF 5133F 52.15F 54.36F SD.97-5552 of 56.47°F 56.420 54.96 56.20 Temperature 0 F (6.[7]) Container ID # 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]) *33*, 53 55.68 35.77 54.85 54.22 53.06 53.52 54.12 55.50 55,82 55,14 54.68 55.41 55,69 54.79 53.27 54.06 55.55 55,77 55.00 54.56 55.48 55.69

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6.[6] Date: From 3-9-15 to 3-9-15 Location: Dome 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 (9F)	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])							
							P	A						
														1
													7	117
				,							•-			1
Ambient Cemperature 6.[12]) 73	50.93	51.01 °F	51.34	52.\5°F	52.9/°F	54.36°F	56.47F	56.47°F	55.58F	54.95°F	56.20F	56,47	°F	•F
End Time 6.[13])	0631	०७८८	0818	0927	1028	1139	1227	1324	1427	1526	1624	1725		
6.[13]	Operator:	Operator:	Operator:	Operator	Operator:	Operator	Operator:	Operator:						
	Operator:	Operator:	Operator:	Operator:										

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	DA			
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Operator (print) Operator (print) Operator (print) Operator (print) Operator (print) Operator (print)	Signature Signature Signature Signature Signature Signature Signature Signature	/ / Z# Initial	s Date / s Date	
	Operator (print) Operator (print) Operator (print) Operator (print) Operator (print)	Operator (print) Signature Operator (print) Signature Operator (print) Signature Operator (print) Signature Operator (print) Signature	Operator (print) Signature J J J Operator (print) Signature Z Initia J Operator (print) Signature Z Initia	Operator (print) Signature J J J J J J J J J J J J J J J Derator (print) Signature Z J J J J J Derator (print) Signature Z J J J J J Derator (print) Signature Z J J J J J Derator (print) Signature Z J J J J J Derator (print) Signature Z J J J J Derator (print) Signature Z J J J J Derator (print) Signature Z J J J J J Derator (print) Signature Z J J J J J J J J J J J J J J J J J J

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SOM or designee (print)

Signature Signature

Z# Initials Date

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

6.[6] Date: From 3-9-15 to 3-10-15 Location: 375

	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				
	1830	1929	2030	2129	2228	2331	0027	0 28	0230	0329	0429	6,[6]	6.[6]	6.[6]
Calibrated	Brand	Brand	Brand	Brand	Brand	Brand	Brand	Brand	Brand	Brand	Brand	0574 Brand	Brand	Brand
Infrared Thermometer	Model A	Mgpel A	Model A	Model: M	Model	Modul	Model	Made				1		
(4.2.1[1][B])	Cal Due Date	Cal Due Date		nn	Cal Dua Date	Model	nA-	ZVZ	Motie	MXA	Model	Madel	Model	Model
			Cal Die Date	Cal Due Date	Cal Du Date:	Cal Due Date	Cal Dut Date	Cal Due Date	Cal Due Rate	Cal Due Date				
	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number	File Number
Ambient	Cuca			-					-					
Temperature (6 [7])	54.78°F	53.00°F	53.15°F	5/.43 °F	52.44°F	5218 °F	51.96°F	51.42°F	5432°F	51.04°F	51.25°F	50.95 F	°F	oF.
Container ID #	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	T (85)	T (07)							
(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])	(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])					
69685 11	54.73	53.05	53.59	52.09	53.21	53.06	52.92	52.51	5252	52.36	52.76	52.52	MA	(0.[8]/0.[9])
68685 12	54.05	52.34	53.19	51.37	52.60	51.43	52.40	51.96	51.95	51.76	52.12	51.78	14/1	MA
50522 -4	54.63	53.39	53.45	52.59	53.20	53.02	52.82	52.45	52.43	52.31	52.57			11
50523 75	54.44	53.12	53.36	52.27	53.01	52.82	52.65	52.27	52.25	52./3	52.32	57.41		-+-
				12.		3 2 : 0 2	3 (. 0)	32.27	5 6.00	9 2.73	3 6.3 6	52,17		
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6.[6] Date: From 3-9-15 to 3-10-15 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)	Temp (°F)				
				(3,(3,73,(5),	(elle)/elle)/	(0,[0]0,[2])	(0.[0]/0.[9])	(0.[8]/0.[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])
								-					\	
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					<u> </u>	-								
													\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<u> </u>
														\
Ambient Temperature	54.75°F	53 044 ==	e-7 /c-				-:01	=1 (10)						<u> </u>
(6.[12])		52.94 °F	53./5°F	51.40°F	52.44F	52.12 °F	51.96°F	51.48°F	51.32°F	51.04F	51.25°F	50.95°F	°F	——⊸°F
End Time (6.[13])	1831	1930	2030	2130	8222	2332	0027	0129	0230	0329	0429	05-25-		
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:	Operator	Operator:	Operator:
						V = 7 -				=7K_		- J.		

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6.[6] Date: From 3	-9-15 to 3-10	Location: 315						
6.[2] Comments:	Did not en dome 37	ter dome 375 p	using data	er standing	order	1247 1	w 2. Tru	pratures
		bo	£ 44					
			The level	State				
				this was	3-10	4 4000		
						3		
6.[17] Performed by: W: U2 J. U5 Operator (print) John (W: June Operator (print)	Signature Signature	Z# Initials Date //9055/070 / 3.9.15	Operator (print)	/ Signature / Signature	/ Z# /	/ / Initials Date		
- Zimmy Rom	e lo Signature	Z# Initials Date 1234258 TR1 3-10-15	Operator (print)	\ /	Z# /	Initials Date		
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature A	Z#	Initials Date		
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature /	Z#	Initials Date		
Operator (print)	Signature /	Z# Initials Date	Operator (print)	Signature /	7#	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		
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SOM or designee (print)