From: Haagenstad, Mark P

Sent: Friday, December 19, 2014 3:59 PM

To: Ryan.Flynn@state.nm.us; Jeff.Kendall@state.nm.us; John Kieling; steve.pullen@state.nm.us; Kliphuis, Trais, NMENV; Timothy.Hall@state.nm.us; siona.briley@state.nm.us; ricardo.maestas@state.nm.us; Gregory.Lauer@state.nm.us; steve.holmes@state.nm.us; coleman.smith@state.nm.us; butch.tongate@state.nm.us

Cc: Pete Maggiore; Silas DeRoma; Cummings, Lisa K; Nickless, David J; Bishop, M. Lee; Turner, Gene E; Armijo, Karen (CONTR); Wallace, Terry C; Torres, Enrique; Woitte, Deborah Kay; Clemmons, Steve; Allen, Don; Brandt, Michael Thomas; Sharp-Geiger, Raeanna Racine; Dorries, Alison Marie; Grieggs, Tony; Bacigalupa, Gian A; Vigil-Holterman, Luciana R; Alexander, Rick A; Baumer, Andy; Martinez, Saundra; Sauer, Selena Z; Wood, Yvonne Barbara; Schreiber, Arleen Thorn; Maestas, Pamela Therese; Hargis, Kenneth Marshall; Diaz, Tammy; Juarez, Catherine L; Cabbil, Cheryl Denise; Young, Steven L; Erickson, Randy; Funk, David John; Alexander, Rick A; Frederici, Dave; Diaz, Tammy; Juarez, Catherine L; Robinson, Bruce Alan; Lansing, Michael Alan

Subject: Daily Technical Submission - December 19, 2014

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

Please contact me if additional information would be helpful.

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

December 19, 2014

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 temerpature 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.
 - December 19, 2014 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 December, LANL has conducted HSG sampling on 55 SWBs.
- Additional measures currently underway
 - As a conservative measure, LANL is currently conducting additional monitoring.
 This additional monitoring includes:
 - Containers (SWB) 68685 and SB50522.
 - LANL continuing solid phase micro-extraction.
 - Hourly temperature measurements are currently being performed on SWB 68685 and SB50522.
 - Five (5) other SWB overpacks (containing 55-gallon drums of remediated nitrate salt-bearing waste).
 - Continue twice-weekly HSG sample collection.
- Anticipated Changes to Nitrate Salt-Bearing Waste Containers (e.g. movement, repackaging)
 - o Currently, no further movements or re-packaging are planned.

Other:

As a reminder:

- Twice weekly technical summary conference calls will not occur on December, 23rd, 25th, 30th and January 1st, due to NMED availability and LANL winter closure. Calls will resume on January 6, 2015.
- Daily written submissions will be sent on the following days: December 29, 30 31, and January 2, 2015 during the LANL winter closure.
- All daily inspections and measurements will continue through the winter closure and will be submitted according to the above schedule until January 5, 2015 at which time the normal schedule will resume.

Next Call: Tuesday, January 6, 2014

Summary Chart - Requested Information / Pending Issues:

	Requested Information	Actionee	Status	Completion Date
1.	NMED contact / process for LANL to notify NMED under the Revised Isolation Plan (e.g., 24 hour notices).	NMED		Complete June 5, 2014
2.	Keep NMED informed on the status of ongoing chemistry / analytical work.	LANL		Complete June 9, 2014
3.	On upcoming daily call, provide additional discussion on the potential for liquids in the 350 post-1991 cemented containers (including a discussion of the review of RTR tapes).	LANL		Complete July 6, 2014 (Discussion on call) July 18, 2014 (Meeting held)
4.	On upcoming call, provide additional discussion on why 231 and 375 Permacon fire suppression systems are not part of the LANL RCRA Hazardous Waste Facility Permit Contingency Plan.	LANL		Complete June 5, 2014
5.	Send copy of June 4, 2014 written daily submission to Trais Kliphuis. Also, include her on future daily submissions.	LANL		Complete June 5, 2014
6.	Provide LANL procedures and example records associated with post-1991 TA-55 cementation process discussed on June 6.	LANL		Complete July 3, 2014
7.	Provide information on numbers of containers in the post-1991 cemented waste streams from the TA-55 process discussed on June 6. This should include numbers regarding RTR status (RTR'd, meet WIPP criteria, requiring remediation).	LANL		Complete June 17, 2014 (Supplemental Info provided July 3)
8.	Provide RTR video and pre-screening information associated with those containers requiring remediation from the post-1991 cemented waste streams from the TA-55 process discussed on June 6.	LANL		Complete July 3, 2014
9.	Provide copy of CCP/LANL Interface Document.	LANL		Complete June 9, 2014
10.	Provide a list of the analytes for which LANL is sampling HSG (CO ₂ and LFL analytes).	LANL		Complete June 11, 2014
11.	Discuss potential sampling of HSG for NO _x .	LANL		Complete June 16, 2014

	Requested Information	Actionee	Status	Completion Date
12.	Follow-up with Tim Hall regarding LANL Hazardous Waste Facility Permit and procedures that LANL is developing for possible future sampling of empty parent containers and unremediated nitrate saltbearing containers at LANL.	LANL		Complete Empty Parent June 16, 2014 Unremediated August 14, 2014 (Supplemental information discussed on sampling of parent containers) August 26, 2014 (Letter on applicability of
				LANL HWFP for opening waste containers)

	Requested Information	Actionee	Status	Completion Date
13.	Respond to NMED email request for information associated with the nitrate salt-bearing parent and daughter waste containers.	LANL		Complete July 9, 2014 (Letter sent addressing items 1-4 and 6-9 of the email request)
	WIPP Recovery Daily Meeting Action List item #84 – NMED requested a copy of the LANL remediation records for waste stored in			July 17, 2014 (Letter sent with updated spreadsheet)
	Panel 6 (Trais Kliphuis) – is a subset of the information in item 5 of this action.			August 7, 2014 (First submittal in response to item 5)
				August 14, 2014 (Letter addressing items 2 & 8 - Second submittal in response to item 5)
				August 18, 2014 (Third submittal in response to item 5)
				August 21, 2014 (Fourth submittal in response to item 5)
				August 27, 2014 (Fifth submittal in response to item 5)
				September 4, 2014 (Sixth submittal in response to item 5)
				September 9, 2014 (Seventh submittal in response to item 5)
				September 11, 2014 (Eighth submittal in response to item 5)
				September 22, 2014 (Ninth submittal in response to item 5)
				September 23, 2014 (Tenth submittal in response to item 5)
				October 1, 2014 (Eleventh submittal in response to item 5)
				October 8, 2014
				(Twelfth submittal in response to item 5)
				October 16, 2014 (Thirteenth submittal in response to item 5)
				October 23, 2014 (Fourteenth submittal in
				response to item 5) October 27, 2014
				(Fifteenth submittal in response to item 5)
				October 28, 2014 (Sixteenth submittal in response to item 5)
				November 3, 2014 (Seventeenth submittal in response to item 5)

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

	Requested Information	Actionee	Status	Completion Date
24.	NMED requested the procedure for sampling empty parent drums that previously contained nitrate salt-bearing waste.	LANL	EP-AREAG-WO-DOP- 1245 is included in Enclosure 1 to LANL's July 3, 2014 Response to Request for Information on Management of Waste at LANL.	Complete July 8, 2014
25.	NMED requested an additional discussion on a future technical call regarding CO ₂ , including data.	LANL		Complete August 14, 2014 (Meeting held)
26.	NMED requested additional discussion on CIN-01 waste containers and absorbent, including confirmation and extent of use.	LANL		Complete July 18, 2014 (Meeting held)
27.	NMED requested historic analytical information on pH of liquids associated with gypsum cemented waste.	LANL		Complete August 7, 2014
28.	NMED requested link to pdf of Actinide Quarterly edition (3 rd Q 2008).	LANL		Complete July 21, 2014
29.	NMED requested a copy of lessons learned	LANL		Complete August 11, 2014
30.	NMED request regarding empty drum sampling presentation.	LANL	Presentation is a pre- decisional draft/working document not for external release	August 25, 2014
31.	Respond to NMED email request dated 8/12/2014 for information associated with the nitrate salt-bearing waste containers.	LANL		Complete September 11, 2014
32.	NMED request regarding technical presentation.	LANL	Presentation is a pre- decisional draft/working document not for external release	August 25, 2014
33.	NMED request regarding literature review of catalytic reactions.	LANL	Literature review is a pre-decisional draft/working document not for external release	August 25, 2014
34.	LANL requested to schedule a meeting with NMED on remediation planning and schedules.	LANL / NMED	In Progress Meeting scheduled for Monday September 29th	Complete September 29, 2014 (meeting held)
35.	Schedule a third update on LANL efforts – including teams.	LANL / NMED		Complete October 20, 2014

	Requested Information	Actionee	Status	Completion Date
36.	NMED request regarding LANL Causal Analysis associated with processing of nitrate salt-bearing waste at WCRRF – when document is Final.	LANL	Document is currently Draft.	
37.	NMED requested a diagram illustrating the current locations within the 375 Permacon of the 55 SWBs that contain the 57 remediated nitrate salt-bearing waste containers. NMED also requested a list of these 55 SWBs and the waste drums within each SWB (including the container numbers and waste stream type).	LANL		Complete October 27, 2014 (Diagram submitted) November 3, 2014 (Table submitted) November 20, 2014 (Revised table submitted)
38.	NMED requested documentation regarding CIN01.001 waste containers that are not part of the September 19, 2014 Nitrate Salts-Bearing Waste Container Isolation Plan, Revision 2.	LANL	In Progress LANL will submit this documentation in batches as it is becomes available.	Submitted 100 out of 586 RTRs and documentation on October 3, 2014. Submitted documentation for 101-200 containers on October 10, 2014. Submitted documentation for 201-300 containers on October 16, 2014. Submitted documentation for 301-400 containers on October 23, 2014. Submitted documentation for 401-500 containers on October 27, 2014. 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.

	Requested Information	Actionee	Status	Completion Date
39.	NMED requested a diagram of the location of the thermocouples on 68685 and SB50522.	LANL		Complete October 27, 2014
40.	NMED requested a copy of the safety basis document for remediation planning when it is finalized.	LANL	Document is currently in Draft.	
41.	Trending and correlation of temperature and HSG monitoring data.	LANL	In progress	
42.	Schedule a fourth update on LANL efforts – including teams.	LANL/ NMED		Complete November 3, 2014
43.	Schedule a fifth update on LANL efforts – including teams.	LANL/ NMED		Complete November 20, 2014
44.	Schedule a sixth update on LANL efforts – including teams.	LANL/ NMED		Complete December 9, 2014
45.	NMED requested documentation regarding CIN01 drums.	LANL	In Progress Additions to original questions added during technical phone call December 9, 2014.	
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.	

Remediated Nitrate Salt Container Headspace Gas Analysis

		680	685			SB50	0522	
Date	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
12/19/14	103	361	9291	2643	2126	503	41276	963

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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 12-15-14 to 12-21-14

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	Monday 6.[6]	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Start Time: <u>0910</u>	6.[6] Start Time: <u>08391</u>	6.[6] Start Time: 1017	6.[6] Start Time: <i>19</i> 23	6.[6]	6.[6]	6.[6]
m	Start Time. DITO	Start Time; Woo [Start Time: 101	Start Time: DACS	Start Time:	Start Time:	Start Time:
TA-54-231							
Calibrated Infrared	Brand: Fluke	Brand: Fluid	Brand: Flull	Brand: FlyCo Model: So	Brand:	Brand:	Brand:
Thermometer	Model: Stell	Model: 501	Model: 561	Model: 50	Model:	Model:	Model:
(4.2.1[1][B])	Cal. Due Date: 07/2015			Cal. Due Date: 07/9/K	Cal. Due Date:	Cal. Due Date:	Cal. Due Date:
	File Number 101974	File Number 101914	File Number 101974	File Number 101974	File Number	File Number	File Number
Ambient Temperature (6.[7])	29.8 °F	30.7°F	36.7°F	33.4°F		oF	°F
Container ID #	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)
Container 1D #	(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])
S818435	31.1	337	38.9	35.3			
S802833	30.5	31.9	37.3	33.9			
S801676	30.4	31.9 31.0	37.0	34.0			
S816810	28.3	28.8	35.4	32.0			
70069	28.9	28.9	35.4	31.6			
S822844	1.28.8	29.0	36.0	32.1			
S825879	28.4 28.5	28.8	35.7	32,0			
S793724	45/28.7 78.4	28.9	30,0	32.1			
S813545	45/430.6787	29.0	36.1	32.0			
S822713	215/130-7 30.6	30.7	37.5	34.1			
S802739	30.7	30.9	37.8	34.0			
69907	30.6	31.15	37.9	34,2			
S804995	31.1	3.4	38.2	34.5			
S816434	32.8	32.8	39.4	36.0			

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6.[6] Date: From 12.15-14 to 12-21-14

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Container ID #	Temp (°F) (6.[8]/6.[9])						
ΓA-54-231 (continue	d)						
S805289	32.3	32.1	39.2	35.9			
S862888	31.9	32.0	38.4	35.0			
70072	31.2	31.4	37.7	34.5			
S823184	31.4	31.2	38.0	34.9.			
S822599	31.0	30.5	37.7	34.4			
69904	79.7	29.6	36.4	33.0			
S805051	29.5	79.2	36.2	33.1			
S864213	79.8	29.5	36.5	N1219123 3 23/			
S853714	79.3	28.4	36.2	ないという	H		
S803078	79.7	28.5	36.634.8 1917	4 12 J 9 33 2			
S825878	38.1	29.3	26.8	P310122 = 335			
S823124	30.5	29.9	37.1	221872 - 333.	7		
S804948	31.9	31.4	38.7	1 112	3		
S813385	32.4	31.8	38.4	357			
S842446	34.5	24.1	40,3	37.2			
ambient Temperature	31.4°F	3.3°F	38.3°F	35.0°F	۰F	oF.	oF.
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6.[6] Date: From 12-15-14 to 12-21-14					
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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 12-15-14 to 12-21-14

	N. I	1 7 1	1				
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
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TA-54-375 Cell 1			Wie lie de la				
Calibrated Infrared	Brand:	Brand:	Brand: Flyke	Brand: Huko	Brand:	Brand:	Brand:
Thermometer	Mode:	Model:	Model: 561	Model: _56 _	Model:	Model:	Model:
(4.2.1[1][B])	Cal. Due Date:	Cal. Due Date:	Cal. Due Date: 6/12/15	Cal. Due Date 6-12-15	Cal. Due Date:	Cal. Due Date:	
	File Number	File Number	File Number	File Number	File Number	File Number	File Number
Ambient Temperature (6.[7])	°F	°F	47.4 °F	52.0F	°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				D 35-5 " DIQU			
68540			50.5	53-2555 PAIRI			
LA00000070503 68553			49.8	52.855-47 1121814			
69445			51.2	52754-2 13101			
69618	NA	N/A	50.5	5215434 TM81			
69013		1		52.955-3 100	8		
LASB50522				54,253 3000			
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LASB50073			50.9	53.0 53-F1818H	1		
69636				544			
69616			51.4	53.			
69417			50.6	54.0			

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	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Container ID #	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
TA-54-375 Cell 1 (con	tinued)					MUSICAL BUILDING	
69620			56.5	53.8			
69520			51.3	54.0			
69641			31.5	54.5			
69298			51.4	54,9			
LASB02203	NO	01/10	52.0	54.7			
Ambient Temperature (6.[12])	°F	°F	<u></u> 50.] ∘F	<u>S1.0</u> ∘ _F	°F	oF	°F
End Time (6.[13])			11 38	1120			
6.[13]	Operator:	Operator: Operator:	Operator: Operator:	Operator:	Operator:Operator:	Operator:	Operator:

6.[2] Comments: 12 15 14: Due to low D/D alarm unable to enter cell. W Issue may be on going due to maintenance on FE-001

11/14/14: Due to low DIP alarm unable to enter cellits some is organize until maintenance 1550cl is resolved on FE-01.

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6.[6] Date: From 12-15	-14 to 12-21-14			
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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 12-15-14 to 12-21-14

					7.11		
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6] Start Time:	6.[6] Start Time:	6.[6] Start Time: 139	6.[6] Start Time: 1105	6.[6] Start Time:	6.[6] Start Time:	6.[6] Start Time:
l	Start Time;	Start Time:	Start Time: 1133	Start Time: 1100	Start Time:	Start Time:	_ Start Time:
TA-54-375 Cell 2		Is a second seco	1				
Calibrated Infrared	Brand:	Brand:	Brand: Fluke	Brand: Huke Model: 561	Brand:	Brand:	Brand:
Thermometer	Model: Cal. Due Date:	Model:	Model: SC) Cal. Due Date: GIZ	Cal. Due Date6-12-15	Model:	Model: Cal. Due Date:	Model: Cal. Due Date:
(4.2.1[1][B])	File Number	File Number	File Number 6 912	File Number 01912	File Number	File Number	File Number
Ambient Temperature (6.[7])	°F	°F	54. Z °F	54,2°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			32.9	53,6			
68638			53.6	55.0			
69615			53.3	55.7			
69635			53.2	56.2			
69642			53.2	55,7			
69630		NA	52.8	55.9			
69633			53.3	55,5			
68430		\	53.7	55/			
68631	NA		53.5	54.8			
69634			55.4	53.5			
68567			52.6	53.6			
94227			53.0	54,4			
LASB50442			53.0	557.			
69644			53.2	53.2			
LASB50443			51. 5	54,6			
69638			25.0	55/			

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6.[6] Date: From 12-15-14 to 12-21-14

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	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 2 (con	tinued)						
68624	\		52.2	55.5			
68507			51.3	55.1			
69568			51.9	55,9			
69553			51.0	53.8			
69598			50.5	53,3			
LASB50559			52.5	54.7			
69015	NA	N/N	57.9	53.9			
69639			53.0	56,2			
69637			51.9	53.8			
Ambient Temperature 6.[12])		°F \	<u>So.9</u> °F	_54.7F	°F	°F	oF
End Time (6.[13])			1148	1114			
6.[13]	Operator:	Operator: Operator:	Operator:	Operator: Operator:	Operator:Operator:	Operator:	Operator:

alarm unable to enter cell to Isrue may be ongoing 6.[2] Comments: DN FE-001.

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Date

Date

Date

Date

Date

Date

Date

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SOM or designee (print)

Signature

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6.[17] Performed by:	(
	_ / _ / _ / _ /	02/002 / / / / / /		/	/	/
Operator (print)	Signature	73582 / 4 / 12 15 14 Z# Initials Date	Operator (print)	Signature	Z#	Initials
(Kappine) was	in Duran	115 PM 1 10 11/14/14		/	/	/
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials
INDVAS / ILI	L/AR-Viz	1 236382 / 4/12/17/14			/	/
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials
U65 estoper	- Laker	HUS78, 18 /12/014		/	/	
Operator (print)	Signature /	Z# Initials Date	Operator (print)	Signature	Z#	Initials
THOMAS IGA	-104-10	12/38/ / 12/18/14				/
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials
Oslera logar	Jelua	7/16519-8/1/2/9/4			/	
Operator (print)	Signature /	Z# Initials Date	Operator (print)	Signature	Z#	Initials
		/ / /		/	/	
Operator (print)	Signature	Z# Initials Date	Operator (print)	Signature	Z#	Initials
8.1[2] Reviewed by:						
[=] 1.01101104 0y.	/					

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 12-15-14 to 12-21-14

UET

		<u> </u>		·	1	 	
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
	Start Time: 1646	Start Time:	Start Time: 1126	Start Time: 1/00	Start Time:	Start Time:	Start Time:
TA-54-375 Cell 3				1.			
Calibrated Infrared	Brand: Flyk Model: Sol	Bland:	Brand: Fluke	Brand: Hulle	Brand:	Brand:	Brand:
Thermometer	Cal. Due Date: GYZ \ S	Model: Cal Due Date:	Model: Cal. Due Date: CILIS	Model: <u>56</u> (Cal. Due Date6-13-15	Model:	Model: Cal. Due Date:	Model: Cal. Due Date:
(4.2.1[1][B])	File Number 10 916	File Number	File Number 10)916	File Number 101916	File Number	File Number	File Number
Ambient Temperature (6.[7])	53.0 °F	°F	52.4 °F	-52-B	°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	55.1		55.0	55.5			
69645	35.		55.1	53.3			
94068	54.6		22.9	55.4			
93605	53.8		54.0	54-2			
69548	53.9	NA	54.8	54,3			
69604	54.6		54.8	54-3			
LASB50529	54.2	\	54.7	55.3			
LASB50418	54.5		55.4	55-4			
69036	34.6	\	53.7	54-7			
LASB50451	54.5		53.7	540			
69559	53.8		53.5	53.9			
LASB50448	53.5		53.4	53.4			
Ambient Temperature (6.[12])	<u>53.</u> }°F	°F\	<u>52.7</u> °F	53.8F	°F	°F	°F
End Time (6.[13])	1053		113)	1105			
6.[13]	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:
	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:	Operator:

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6.[6] Date: From 12-15	7-14 to 12-21-14							
6.[2] Comments: 12/14	14: Due to low 51 lued on FE-101	Palarm un	able to ent	ercell. pl. Tss	su is ongoing	until ma	unkna	ince
6.[17] Performed by:	+14	201	1 1					
Operator (print)	Signature	/ 236382/ ** Z# Initials	Date	Operator (print)	Signature	Z#	/ Initials	/ Date
Operator (print)	Signature	71/6598LSN Z# Initials	7 12 1514 Date	Operator (print)	/ Signature	/ Z#	/ Initials	/ Date
Operaton (print)	Duran	//5/91 / Ol Z# Mitials	1 MILE/14	Operator (print)	/ Signature	/ 	/ Initials	/ Date
HOMAS / IGIL	Signature	1003821 7	1 12/17/14		/	/	/	/ D-4-
Operator (print)	Signature	Z# Initials	Date / 12014	Operator (print)	Signature	Z# /	Initials /	Date /
Operator (print)	Signature 1	Z# Initials	Date 18 14	Operator (print)	Signature	Z# /	Initials /	Date
Operator (print)	Signature	/238Z / 4/ Z# Initials	Date	Operator (print)	Signature	Z#	Initials	Date
Operator (print)	Signature	// L598 / S Z# Initials	/12-1819 Date	Operator (print)	/ Signature	/ Z#	/ Initials	Date
8.1[2] Reviewed by:								
SOM or designee (print)	/ Signature	/ / Z# Initials	Date					

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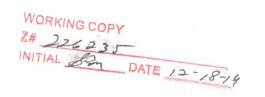
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TA-54 AREA G NITRATE SALT TRU WASTE CONTAINER HOURLY TEMPERATURE DATA SHEET

6.[6] Date: From 12-1814 to 12-1814 Location: 375

		,		,			,						h	
	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:	Start Time:							
(1)	6.[6]	6.[6]	6.[6]	6.[6]	1024	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]	6.[6]
	0630	0224	08a4	6237	TR	1126	1225	1326		1529	1958	1728	1	
Calibrated Infrared	Brand:	Brand:	Brand:	Brand:	Brand:	Brand	Brand							
Thermometer	Model:	Model:	Model:	Model:	Model:	Model:	Model	Model:	Model:	Model:	Modal:	Model:	Model:	Model
(4.2.1[1][B])	01014	Cal. Due Date:	Cal Due Date:	2.6	2121514	- Natharia	515 11	0.00	- A- X-41-			1-1-1-1		
	Cal. In This	Cal. Due Date:	Cal. Due Date:	Cal. Dulo Pare:	Cal. Date Date	Cal. DANDAR	Cal. Dut Date	Cal. Du Date:	Call On Date:	Cal. Dae Date:	Cal. Due Orte:	Cal. Due Pare:	Cal. Due Date	Cal Due Date
	File Number	File Number	File Number	File Number	File Number	File Number	File Number							
Ambient	1.3	110 30	.10.0	130 (1	-1			-1 1 1	(101	-1		6		
Temperature	47.55 of	42.38	47.9°F	49,61°F	51.44	52.14F	51.96	51.64	51.86°F	51.71 °F	61.37°F	51.05°F	°F	~F
(6.[7]) 73														1
Container ID # (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)	Temp (°F)							
		49,43							(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])	(6.[8]/6.[9])
98982 L,	49,44		4875			53.43	5227	52.55	53.12	\$2.93	52.65	52.48	¥	1-117
68685 TZ	48.63	48.53	48.99		52.22		52.01	51.43	52.26	52,20	51.87	S1.73	F	()
50522 74	49.14	49.09	49.31	50.42	51.81	52,2	51.87	5694	52.26	52,02	51,80	51.69		
50522 T5	49.83	48,76	48.93	50,08	5449	51,93		51.64		\$1.73	51.46	51.32		
				., .,					7	J ()	0	0.00	_	
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6.[6] Date: From 12-18-14 to 12-18-14 Location: 375

Container ID # (6,[8]/6,[9])	Temp (°F) (6.[8]/6.[9])	Temp (°) (6.[8]/6.[9												
		<u> </u>												
										No.				
										A				
													 	
														1
													W	#
nbient nperature [12]) 73	41.55°F	47.38	47.9°F	49161	51.44	52.4	51.94	51.64	\$1.83°F	5173°F	51.37-	51.0 S.F	°F	
Time [13])	0631	6725	0825	0925	1026	1122	126	1327	1431	1530	1629	1730		
6.[13]	Operator:	Operator:	Operator:	Operator:	Operator	Operator:	Operator:	Operator:	Operator:	Operator_	Operator	Operator:	Operator:	Operator
	Operator:	Operator.	go ator	Operator:	Operator:									

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			rage 3 01	3			
6.[6] Date: From 12-19-14	to [2-19-14	Location: 375					
6.[2] Comments: d, d R 2 Ce. 11	temps ;	r permecci	From da	ta logger	/	Standing	in Do
				DA			
6.[17], Performed by:	Jeffer :	201458 WT 12-18.	19	/			
	gnarlire	Z# Initials Date D/45>8 50 / 12-19-	Operator (print)	Signature /	Z# /	Initials Date	
Operator (print) Sig	enature	Z# Initials Date	Operator (print)	Signature	AT T	Initials Date	
Operator (print) Sig	nature	234035	Operator (print)	Signature	Z	Initials Date	
Property (print) Signature	vature	163 216/ cm / 721919 2# Initials Date 27 977 A / (7 Vor)	Operator (print)	/ Signature	Z#	/ / / Initials Date	
	nature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date	
Operator (print)	nature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date	
Operator (print) Sig	nature	Z# Initials Date	Operator (print)	Signature	Z#	Initials Date	
8.1[2] Reviewed by:							
SOM or designee (print) Sign	nature	Z# Initials Date					

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

6.[6] Date: From 2-18-14 to 2-19-14 375 Location: Start Time: 6.[6] 6.[6] 2026 2327 6.[6] 0028 6.[6] 0198 0229 0498 0338 6.[6] 6.[6] 6.[6] 1830 1925 2226 0522 Calibrated rand: Rrand Brand: (rand: Brand: Brand: rand: Brand: Infrared Mode Mod Mode Thermometer Model: Model: Cal. Due Rate: N Cal. Due Date: Cal. Due Date: Cal. Due Date: کم (4.2.1[1][B]) Cal. Due Date: Cal. Due Date: Cal. Due Date: Cal. Due Date: Cal. Due Due Cal Due Date: Cal. Due Date: Cal. Due Date: Cal Due Date: Cal. Due Rate: File Numbe File Numbe File Number File Number File Number File Numbe File Number Ambient 50.5/ °F 49.53°F 48.5°F 47.3 °F 47.64 °F 46,51°F 4569°F NAP 50.35°F 46.18°F 50.97°F Temperature 50.84F 45.59°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]) 68685 523 5255 52,55 52,15 50.13 49.51 49.12 48.64 47.85 47.72 51.42 50.49 51.4 8685 51.71 48,92 51.3 49.6 49.10 48.53 46.98 50.54 47.10 46.95 48.32 48.73 51.69 51.71 51,52 51.45 49.13 48.12 47,99 47.87 50.89 50,18 50522 (15) 51.35 51.37 51.54 51.08 50.54 49.88 49.12 48.69 48.41 48.16 4745 47.56 nIA

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6.[6] Date: From 12-18-14 to 12-19-14 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])
						- A.								
						THE .								<u> </u>
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													\	
				<u> </u>										(
														\
Ambient Temperature (6.[12])	50.97°F	50.84°F	50,5/°F	50.3℃°F	49,53°F	48.5°F	<u>4∏.3</u> ∘ _F	47.64°F	46.51 °F	46.1 % °F	45.69 •F	45.6°F	°F	-\-e^F
End Time (6.[13])	1830	1925	2505	2/28	2226	2327	0029	0128	0230	0329	0429	0523		
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:

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AT	ΓACI	łМ	ENT	6

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6.[6] Date: From 12-18-14 to 12-19-14 Location: 37.5	
6.[2] Comments: Did Not Enter permacon per Standing order 1247 RZ All temps are taken from data logger in control room in Dome 375	
taken from data loggest in confrol room in Dome 375	
	· · ·
6.[17] Performed by:	
Perator (prop) 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	
Operator (print) Signature Z# Initials Date Operator (print) Signature Z# Initials Date	
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8.1[2] Reviewed by:	