ERID-525181
EP2014-5323

From: Haagenstad, Mark P
Sent: Friday, September 19, 2014 3:52 PM
To: Ryan.Flynn@state.nm.us; Jeff.Kendall@state.nm.us; tom.blaine@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
Cc: Pete Maggiore; Silas DeRoma; Cummings, Lisa K; Nickless, David J; Bishop, M. Lee; Turner, Gene E; Armijo, Karen (CONTR); Wallace, Terry C; Mousseau, Jeffrey David; Cox, Daniel Ray; Torres, Enrique; Woitte, Deborah Kay; Johns-Hughes, Kathryn W; Clemmons, Steve; Allen, Don; George, Victoria A; Roberts, Kathryn Margaret; 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
Subject: Daily Technical Submission - September 19, 2014

Attached is the written daily technical submission for today. The Permittees are submitting this 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 VIII of the May 29, 2014, *Revised LANL Nitrate Salt-Bearing Waste Container Isolation Plan*.

Please contact me if additional information would be helpful. Thank you.

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

September 19, 2014

LANL Technical Update:

- **Location of Nitrate Salt-Bearing Wastes**
  - Remediated nitrate salt-bearing waste containers.
    - All containers remain in the 375 Permacon.
  - Unremediated nitrate salt-bearing waste containers.
    - All containers remain in the 231 Permacon.
- **Monitoring - Daily Temperature**
  - Temperatures remain below 90°F.
    - Previous day's daily temperature data attached.
- **Monitoring – Visual Inspections**
  - No abnormal conditions.
- **Additional measures currently underway**
  - As a conservative measure, LANL is currently conducting additional monitoring. This additional monitoring includes:
    - Container (SWB) 68685.
      - Continue daily head space gas (HSG) sample collection.
        - September 19, 2014 HSG data attached
          - H_2, CO, CO_2 and N_2O
        - LANL also continuing *solid phase micro-extraction.*
      - Hourly temperature measurements.
        - Previous day's hourly temperature data attached.
        - Temperatures remain below 90°F.
    - Container (SWB) SB50522.
      - Continue daily HSG sample collection.
        - September 19, 2014 HSG data attached
          - H_2, CO, CO_2 and N_2O
        - LANL also continuing *solid phase micro-extraction.*
      - Hourly temperature measurements.
        - Previous day's hourly temperature data attached.
        - Temperatures remain below 90°F.
    - Five (5) other SWB overpacks (containing 55-gallon drums of remediated nitrate salt-bearing waste).
      - Continue bi-weekly HSG sample collection.

        - LANL has conducted HSG sampling on each of the 55 SWBs that contain 55-gallon drums of remediated nitrate salt-bearing waste.

- **Anticipated Changes to Nitrate Salt-Bearing Waste Containers (e.g. movement, re-packaging).**
    - Currently, no further movements or re-packaging are planned.

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 on-going 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

12.	Follow-up with Tim Hall regarding LANL Hazardous Waste Facility Permit and procedures that LANL is developing for possible future sampling of empty parent containers and unremediated nitrate salt-bearing containers at LANL.	LANL	---	Complete Empty Parent June 16, 2014 Unremediated August 14, 2014 (Supplemental information discussed on sampling of parent containers) August 26, 2014 (Letter on applicability of LANL HWFP for opening waste containers)
13.	Respond to NMED email request for information associated with the nitrate salt-bearing 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	In progress – remaining are portions of item 5	Partially 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 sent 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)

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	---	Information will be included in LANL response to NMED's August 26, 2014 letter.
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)
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	Complete July 8, 2014

			1 to LANL's July 3, 2014 *Response to Request for Information on Management of Waste at LANL.*	
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 (3rd 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	
35.	Schedule a third update on LANL efforts – including teams.	LANL / NMED	In progress	
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	LANL	In progress	

	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).			

Next Call: Tuesday, September 23, 2014

Remediated Nitrate Salt Container Headspace Gas Analysis Results

	68685				69553				69615				69616				SB50069				SB50452				SB50522			
Date	H_2 ppm	CO ppm	CO_2 ppm	N_2O ppm	H_2 ppm	CO ppm	CO_2 ppm	N_2O ppm	H_2 ppm	CO ppm	CO_2 ppm	N_2O ppm	H_2 ppm	CO ppm	CO_2 ppm	N_2O ppm	H_2 ppm	CO ppm	CO_2 ppm	N_2O ppm	H_2 ppm	CO ppm	CO_2 ppm	N_2O ppm	H_2 ppm	CO ppm	CO_2 ppm	N_2O ppm
09/19/14	136	1139	24807	7831																					8601	496	62213	1036

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 9-15-14 to 9-21-14

	Monday 6.[6] Start Time: 0853	Tuesday 6.[6] Start Time: 0945	Wednesday 6.[6] Start Time: 1010	Thursday 6.[6] Start Time: 0955	Friday 6.[6] Start Time:	Saturday 6.[6] Start Time:	Sunday 6.[6] Start Time:
TA-54-231							
Calibrated Infrared Thermometer (6.[7])	Brand: Fluke Model: 561 Cal. Due Date: 7-29-15 File Number 101974	Brand: Fluke Model: 561 Cal. Due Date: 7/29/15 File Number 101974	Brand: Fluke Model: 561 Cal. Due Date: 7/29/15 File Number 101974	Brand: Fluke Model: 561 Cal. Due Date: 7/29/15 File Number 101974	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[9])	63.5 °F	66.5 °F	65.8 °F	63.3 °F	°F	°F	°F
Container ID #	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
S818435	63.1	66.0	65.4	62.1			
S802833	63.1	66.0	65.3	62.0			
S801676	63.1	65.7	65.2	61.9			
S816810	62.6	65.5	64.7	61.6			
70069	62.3	65.3	64.5	61.5			
S822844	62.5	65.6	65.0	62.1			
S825879	62.8	65.5	65.1	62.1			
S793724	62.7	65.4	64.9	62.0			
S813545	62.6	65.1	64.6	61.5			
S822713	63.3	65.6	65.3	62.6			
S802739	63.5	65.9	65.2	62.4			
69907	63.3	65.7	65.1	62.2			
S804995	63.5	65.8	65.2	62.6			
S816434	63.6	65.9	65.4	62.4			

WORKING COPY
Z# 187066
INITIAL JR DATE 9-15-14

ATTACHMENT 2
Page 2 of 3

6.[6] Date: From 9-15-14 to 9-21-14

Container ID #	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
TA-54-231 (continued)							
S805289	63.5	65.9	65.4	62.4			
S862888	63.5	65.8	65.1	62.2			
70072	63.4	65.7	65.2	62.5			
S823184	63.8	65.9	65.4	62.9			
S822599	63.4	65.9	65.3	62.8			
69904	62.8	65.2 65.4	64.9	61.9			
S805051	62.7	65.4 65.2	65.0	61.8			
S864213	63.1	65.4	64.8	61.9			
S853714	63.2	66.0 63.6	65.1	62.4			
S803078	63.4	65.6 66.8	65.4	62.7			
S825878	63.3	65.7 65.6	65.2	62.5			
S823124	63.4	66.1 66.7	65.3	62.6			
S804948	63.9	66.1 66.1	65.5	62.8			
S813385	64.0	66.2 66.1	65.6	63.2			
S842446	64.3	66.2	65.9	63.1			
Ambient Temperature (6.[14])	63.9 °F	66.7 °F	66.8 °F	63.7 °F	°F	°F	°F
End Time (6.[15])	0859	0958	1021	1010			
6.[15]	Operator: JR Operator: EC	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

ATTACHMENT 2
Page 3 of 3

6.[6] Date: From 9-15-14 to 9-21-14

6.[2] Comments:

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Jackie Romero	Jackie Romero	1870661	JR	9-15-14
Eloy D. Cordova	[signature]	1114188	EC	9-15-14
Josephine Duran	[signature]	151971	[initials]	9/16/14
Thomas Hoel	[signature]	236382	[initials]	9/16/14
Josephine Duran	[signature]	151971	[initials]	9/17/14
Thomas Hoel	[signature]	236382	[initials]	9/17/14
Alfredo Aguilar	[signature]	293128	[initials]	9/18/14
Josephine Duran	[signature]	151971	[initials]	9/18/14
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
	/	/	/	/

ATTACHMENT 3
Page 1 of 3

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

6.[6] Date: From 9.15.14 to 9.21.14

	Monday 6.[6] Start Time: 0655	Tuesday 6.[6] Start Time: 1235	Wednesday 6.[6] Start Time: 1131	Thursday 6.[6] Start Time: 1332	Friday 6.[6] Start Time:	Saturday 6.[6] Start Time:	Sunday 6.[6] Start Time:
TA-54-375 Cell 1							
Calibrated Infrared Thermometer (6.[7])	Brand: Fluke Model: 561 Cal. Due Date: 6.12.15 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[9])	59.6 °F	68.4 °F	64.9 °F	72.2 °F	°F	°F	°F
Container ID #	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
68685	59.0	69.4	63.7	72.9			
68540	59.2	69.2	64.0	72.2			
68553	59.5	69.0	64.1	72.3			
69445	59.0	69.4	64.2	73.0			
69618	59.3	68.3	63.8	71.8			
69013	59.6	68.3	63.9	71.2			
LASB50522	60.0	68.3	63.9	71.6			
LASB50452	59.8	68.1	63.8	70.7			
LASB50431	59.6	67.1	63.1	69.7			
LASB50069	59.9	68.2	63.8	71.3			
LASB50073	60.3	68.5	63.7	71.9			
69636	59.8	68.2	63.7	72.1			
69616	59.7	67.3	64.0	70.6			
69417	59.6	68.7	64.1	72.3			

ATTACHMENT 3
Page 2 of 3

6.[6] Date: From 9.15.14 to 9.21.14

Container ID #	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
TA-54-375 Cell 1 (continued)							
69620	59.9	68.5	63.8	71.5			
69520	59.9	67.8	63.9	70.8			
69641	60.1	68.2	63.6	71.5			
69298	60.3	67.7	63.4	70.6			
LASB02203	60.0	67.4	63.4	70.5			
Ambient Temperature (6.[14])	59.8 °F	68.8 °F	64.9 °F	72.5 °F	____ °F	____ °F	____ °F
End Time (6.[15])	0700	1240	1135	1337			
6.[15]	Operator: EC Operator: JR	Operator: SA Operator: SC	Operator: SA Operator: WS	Operator: SA Operator: SC	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

6.[2] Comments:

ATTACHMENT 3
Page 3 of 3

6.[6] Date: From 9.15.14 to 9.21.14

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Elora Cordova	Elora Cordova	111418Y	EC	9.15.14
Jackie Romero	Jackie Romero	187066	JR	9-15-14
Tina Aguirre	Tina Aguirre	614977	TA	9-16-14
Jesse Chavez	Jesse Chavez	214578	JC	9-16-14
William Juarez	William Juarez	201458	WJ	9-16-14
Tina Aguirre	Tina Aguirre	614977	TA	9-17-14
William Juarez	William Juarez	201458	WJ	9-17-14
Tina Aguirre	Tina Aguirre	614977	TA	9-18-14
Jesse Chavez	Jesse Chavez	214578	JC	9-18-14
William Juarez	William Juarez	201458	WJ	9-18-14
	/			
	/			
	/			
	/			
	/			

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
	/			

ATTACHMENT 4
Page 1 of 3

TA-54 AREA G TA-54-375 CELL 2 NITRATE SALT TRU WASTE CONTAINER DAILY TEMPERATURE DATA SHEET

6.[6] Date: From 9-15-14 to 9-21-14

	Monday 6.[6] Start Time: 0812	Tuesday 6.[6] Start Time: 1244	Wednesday 6.[6] Start Time: 1335	Thursday 6.[6] Start Time: 1337	Friday 6.[6] Start Time:	Saturday 6.[6] Start Time:	Sunday 6.[6] Start Time:
TA-54-375 Cell 2							
Calibrated Infrared Thermometer (6.[7])	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101912	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101912	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101912	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101912	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[9])	60.4 °F	65.6 °F	63.6 °F	68.1 °F	°F	°F	°F
Container ID #	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
LASB02198	60.5	64.9	63.1	67.9			
68638	60.2	65.9	63.2	69.3			
69615	60.3	66.9	64.2	70.2			
69635	61.0	67.0	64.4	70.7			
69642	60.1	67.1	64.3	70.6			
69630	60.5	66.8	64.7	70.4			
69633	61.0	66.9	64.4	69.7			
68430	60.3	66.1	64.0	69.2			
68631	60.2	65.9	63.2	68.8			
69634	60.6	64.2	63.1	67.2			
68567	60.2	65.3	63.2	68.6			
94227	60.3	65.0	63.1	68.5			
LASB50442	~~60.8~~ 61.3	65.9	63.6	69.2			
69644	60.8	66.2	63.8	70.1			
LASB50443	60.7	65.5	64.0	69.5			
69638	60.8	66.7	64.1	69.4			

ATTACHMENT 4
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6.[6] Date: From 9-15-14 to 9-21-14

Container ID #	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
TA-54-375 Cell 2 (continued)							
68624	60.6	66.3	64.2	69.1			
68507	60.7	66.5	63.8	69.4			
69568	60.5	66.0	64.0	69.0			
69553	60.7	65.4	63.3	68.7			
69598	60.6	65.7	63.5	68.2			
LASB50559	60.5	65.4	63.2	68.7			
69015	60.8	66.2	63.6	68.9			
69639	61.1	66.6	64.0	69.1			
69637	60.6	66.8	64.1	69.3			
Ambient Temperature (6.[14])	60.9 °F	65.3 °F	63.4 °F	68.9 °F	____ °F	____ °F	____ °F
End Time (6.[15])	0823	1251	1341	1343			
6.[15]	Operator: JR Operator: SC	Operator: [illegible] Operator: JC	Operator: [illegible] Operator: WS	Operator: [illegible] Operator: JC	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

6.[2] Comments:

ATTACHMENT 4
Page 3 of 3

6.[6] Date: From 9-15-14 to 9-21-14

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Jackie Romero	Jackie Romero	1870661	JR	9-15-14
Eloy D. Cordova	[illegible]	1141188	EC	9-15-14
Tina Aguirre	[illegible]	174977	[illegible]	9-16-14
Jesse Chavez	[illegible]	214558	JC	9-16-14
William Juarez	[illegible]	201458	[illegible]	9-16-14
Tina Aguirre	[illegible]	174977	[illegible]	9-17-14
William Juarez	[illegible]	201458	[illegible]	9-17-14
Tina Aguirre	[illegible]	174977	[illegible]	9-18-14
Jesse Chavez	[illegible]	214558	JC	9-18-14
William Juarez	[illegible]	201458	[illegible]	9-18-14
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
	/	/	/	/

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 9.15.14 to 9.21.14

	Monday 6.[6] Start Time: 0703	Tuesday 6.[6] Start Time: 1241	Wednesday 6.[6] Start Time: 1327	Thursday 6.[6] Start Time: 1345	Friday 6.[6] Start Time:	Saturday 6.[6] Start Time:	Sunday 6.[6] Start Time:
TA-54-375 Cell 3							
Calibrated Infrared Thermometer (6.[7])	Brand: Fluke Model: 561 Cal. Due Date: 6.12.15 File Number 101916	Brand: Fluke Model: 561 Cal. Due Date: 6.12.15 File Number 101916	Brand: Fluke Model: 561 Cal. Due Date: 6.12.15 File Number 101916	Brand: Fluke Model: 561 Cal. Due Date: 6.12.15 File Number 101916	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[9])	59.1 °F	62.6 °F	65.7 °F	69.6 °F	°F	°F	°F
Container ID #	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
69519	59.9	66.7	64.2	69.0			
69645	60.2	66.4	65.0	69.1			
94068	60.5	66.7	64.8	69.2			
93605	60.4	66.8	65.5	69.5			
69548	60.2	67.1	65.3	69.7			
69604	60.4	67.0	65.0	69.0			
LASB50529	60.7	67.1	65.1	68.9			
LASB50418	60.0	67.1	65.4	69.1			
69036	59.6	67.5	65.1	70.2			
LASB50451	59.9	67.4	65.4	69.7			
69559	60.2	67.7	65.7	69.5			
LASB50448	60.4	67.3	65.6	69.7			
Ambient Temperature (6.[14])	59.5 °F	67.6 °F	66.3 °F	69.3 °F	°F	°F	°F
End Time (6.[15])	0706	1243	1331	1349			
6.[15]	Operator: SC Operator: JR	Operator: DA Operator: JC	Operator: DA Operator: MS	Operator: DA Operator: JC	Operator: Operator:	Operator: Operator:	Operator: Operator:

ATTACHMENT 5
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6.[6] Date: From 9.15.14 to 9.21.14

6.[2] Comments:

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Eloy D Galdeano	Eloy D	1164188	EC	9.15.14
Jackie Romero	Jackie Romero	1870661	JR	9-15-14
Lina Aguirre	Lina Aguirre	174977	LA	9-16-14
Jesse Chavez		121458	JC	9-16-14
William Juarez		201458	WJ	9-16-14
Lina Aguirre	Lina Aguirre	174977	LA	9-17-14
William Juarez		201458	WJ	9-17-14
Lina Aguirre	Lina Aguirre	174977	LA	9-18-14
Jesse Chavez		121458	JC	9-18-14
William Juarez		201458	WJ	9-18-14

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date

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

6.[6] Date: From 9-18-14 to 9-18-14 Location: 375

	Start Time: 6.[6] 0628	Start Time: 6.[6] 0727	Start Time: 6.[6] 0832	Start Time: 6.[6] 0929	Start Time: 6.[6] 1029	Start Time: 6.[6] 1128	Start Time: 6.[6] 1230	Start Time: 6.[6] 1331	Start Time: 6.[6] 1426	Start Time: 6.[6] 1528	Start Time: 6.[6] 1627	Start Time: 6.[6] 1727	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer (6.[7])	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 6-12-15 File Number 101915	Brand: Model: Cal. Due Date: File Number	Brand Model Cal. Due Date File Number
Ambient Temperature (6.[9])	55.9 °F	55.8 °F	57.5 °F	61.0 °F	65.8 °F	67.8 °F	69.6 °F	72.2 °F	72.6 °F	72.7 °F	73.9 °F	72.7 °F	°F	°F
Container ID # (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
691685	56.6	55.6	57.0	60.0	64.6	67.0	70.7	73.2	74.6	74.8	75.9	74.4		
50522	56.5	56.5	57.5	60.3	64.3	65.7	69.0	71.8	72.9	73.7	73.4	72.4		

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6.[6] Date: From 9-18-14 to 9-18-14 Location: 375

Container ID # (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
Ambient Temperature (6.[14])	56.0 °F	56.2 °F	57.9 °F	62.3 °F	66.1 °F	62.4 °F	69.7 °F	72.4 °F	73.6 °F	73.1 °F	74.6 °F	73.0 °F	°F	°F	
End Time (6.[15])	0629	0728	0933	0930	1030	1129	1231	1332	1427	1529	1628	1728			
6.[15]	Operator: DA / Operator: LW	Operator: DA / Operator: SC	Operator: DA / Operator: LW	Operator: DA / Operator: LW	Operator: LW / Operator: DA	Operator: SC / Operator: SC	Operator: DA / Operator: LW	Operator: DA / Operator: SC	Operator: DA / Operator: LW	Operator: DA / Operator: LW	Operator: DA / Operator: LW	Operator: DA / Operator: LW	Operator: / Operator:	Operator: / Operator:	

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6.[6] Date: From 9-18-14 to 9-18-14 Location: 375

6.[2] Comments: None

NA

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Tina Aguirre	[signature]	174977	DA	9-18-14
Jesse Chavez	[signature]	214578	JC	9-18-14
William Juarez	[signature]	201458	[initials]	9-18-14

NA

Operator (print)	Signature	Z#	Initials	Date

NA

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
Pat O'Grady	Pat O'Grady	151358	JPO	9-18-14

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

6.[6] Date: From Sep 18 to Sep 19 Location: 375/231

	Start Time: 6.[6] 1829	Start Time: 6.[6] 1926	Start Time: 6.[6] 2029	Start Time: 6.[6] 2129	Start Time: 6.[6] 2228	Start Time: 6.[6] 2328	Start Time: 6.[6] 0028	Start Time: 6.[6] 0128	Start Time: 6.[6] 0228	Start Time: 6.[6] 0328	Start Time: 6.[6] 0428	Start Time: 6.[6] 0528	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer (6.[7])	Brand: Fluke Model: 561 Cal. Due Date: 061215 File Number: 101915	Brand: Fluke Model: 561 Cal. Due Date: 061215 File Number: 101915	Brand: Fluke Model: 561 Cal. Due Date: 061215 File Number: 101915	Brand: Fluke Model: 561 Cal. Due Date: 061215 File Number: 101915	Brand: Fluke Model: 561 Cal. Due Date: 061215 File Number: 101915	Brand: Fluke Model: 561 Cal. Due Date: 061215 File Number: 101915	Brand: Fluke Model: 561 Cal. Due Date: 061215 File Number: 101915	Brand: Fluke Model: 561 Cal. Due Date: 061215 File Number: 101915	Brand: Fluke Model: 561 Cal. Due Date: 061215 File Number: 101915	Brand: Fluke Model: 561 Cal. Due Date: 061215 File Number: 101915	Brand: Fluke Model: 561 Cal. Due Date: 061215 File Number: 101915	Brand: Fluke Model: 561 Cal. Due Date: 061215 File Number: 101915	Brand: Model: Cal. Due Date: File Number:	Brand: Model: Cal. Due Date: File Number:
Ambient Temperature (6.[9])	71.6 °F	71.4 °F	67.0 °F	66.1 °F	65.4 °F	65.3 °F	64.7 °F	63.5 °F	62.4 °F	61.6 °F	60.7 °F	60.7 °F	°F	°F
Container ID # (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
68685	72.0	72.0	66.9	65.5	64.3	64.0	63.4	62.6	61.5	60.9	60.0	60.4		
50522	70.1	69.8	65.7	65.1	64.0	63.8	63.2	62.7	61.6	61.2	60.6	60.0		
					NA									

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6.[6] Date: From Sep 18 to Sep 19 Location: 375/231

Container ID # (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
						NA									
Ambient Temperature (6.[14])	71.6 °F	71.2 °F	67.3 °F	66.2 °F	65.3 °F	65.2 °F	64.4 °F	63.6 °F	62.3 °F	61.5 °F	60.9 °F	60.1 °F	____ °F	____ °F	
End Time (6.[15])	1830	1926	2030	2130	2229	2329	0029	0129	0229	0329	0429	0529			
6.[15]	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

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6.[6] Date: From Sep 18 to Sep 19 Location: 375/231

6.[2] Comments: N/C

N/C

6.[1] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Josea Lopez	Josea Lopez	116598	JL	09/19/14
Sammy Barela	Sammy Barela	114474	SB	09.19.14
	NA			

Operator (print)	Signature	Z#	Initials	Date
	NA			

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date