From: Haagenstad, Mark P
Sent: Friday, April 24, 2015 3:49 PM
To: Ryan.Flynn@state.nm.us; Jeff.Kendall@state.nm.us; John Kieling; steve.pullen@state.nm.us; Timothy.Hall@state.nm.us; siona.briley@state.nm.us; ricardo.maestas@state.nm.us; Gregory.Lauer@state.nm.us; steve.holmes@state.nm.us; coleman.smith@state.nm.us; butch.tongate@state.nm.us; Cobrain, Dave, NMENV; kathryn.roberts@state.nm.us
Cc: Pete Maggiore; Silas DeRoma; Cummings, Lisa K; Nickless, David J; Bishop, M. Lee; Turner, Gene E; Armijo, Karen (CONTR); Wallace, Terry C; Torres, Enrique; Woitte, Deborah Kay; Clemmons, Steve; Allen, Don; Brandt, Michael Thomas; Sharp-Geiger, Raeanna Racine; Dorries, Alison Marie; Grieggs, Tony; Bacigalupa, Gian A; Alexander, Rick A; Baumer, Andy; Martinez, Saundra; Sauer, Selena Z; Schreiber, Arleen Thorn; Maestas, Pamela Therese; Hargis, Kenneth Marshall; Cabbil, Cheryl Denise; Young, Steven L; Erickson, Randy; Funk, David John; Alexander, Rick A; Frederici, Dave; Robinson, Bruce Alan; Lansing, Michael Alan; Tymkowych, John M; Branch, Yvette S; Guffee, Debi; Armijo, Karen (CONTR); Saladen, Michael Thomas; epccat@lanl.gov; Vigil-Holterman, Luciana R; Juarez, Catherine L; Diaz, Tammy
Subject: Daily Technical Submission - April 24, 2015

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

Please contact me if additional information would be helpful.

Mark Haagenstad
Environmental Protection Division
Compliance and Permitting Group
Los Alamos National Laboratory
Office: (505) 665-2014
Mobile: (505) 699-1733

NMED / LANL Technical Summary

April 24, 2015

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.
  - Suspect nitrate salt-bearing waste containers.
    - Containers are located in the 375 Permacon.
- **Monitoring - Daily Temperature**
  - Temperatures remain below 90°F.
    - Previous day's temperature data attached.
- **Monitoring – Visual Inspections**
  - No abnormal conditions were observed.
- **Monitoring – headspace gas (HSG)**
  - Containers (SWBs) 68685 and SB50522.
    - Continue daily head space gas (HSG) sample collection.
      - April 24, 2015 HSG data attached.
        - H_2, CO, CO_2 and N_2O.
  - Other containers:
    - A minimum of once per month HSG sampling will be conducted.
      - To date in April, LANL has conducted HSG sampling on 59 containers.
- **Additional measures currently underway**
  - As a conservative measure, LANL is currently conducting additional monitoring. This additional monitoring includes:
    - Containers (SWB) 68685 and SB50522.
      - LANL continuing *solid phase micro-extraction*.
      - Hourly temperature measurements are currently being performed on SWB 68685 and SB50522.
    - Five other SWB overpacks (containing 55-gallon drums of remediated nitrate salt-bearing waste) and four suspect nitrate salt-bearing waste POCs.
      - Twice-weekly HSG sample collection.
        - H_2, CO, CO_2 and N_2O.
- **Anticipated Changes to Nitrate Salt-Bearing Waste Containers (e.g. movement, re-packaging)**
  - Currently, no further movements or re-packaging are occurring.

Other:

Next Call: Tuesday, April 28, 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 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

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

	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. 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 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 (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	---	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 251-300 on December 19, 2014. Submitted RTR Videos 301-312 on January 15, 2015.
39.	NMED requested a diagram of the location of the thermocouples on 68685 and SB50522.	LANL	---	Complete October 27, 2014
40.	NMED requested a copy of the safety basis document for remediation planning when it is finalized.	LANL	Document is currently in Draft.	
41.	Trending and correlation of temperature and HSG monitoring data.	LANL	In progress	
42.	Schedule a fourth update on LANL efforts – including teams.	LANL/ NMED	---	Complete November 3, 2014

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

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

Remediated Nitrate Salt Container Headspace Gas Analysis

	68685				69615				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**
04/24/15	120	312	7382	1718	106	308	6521	303	2614	426	31820	945

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 4-20-15 to _____

	Monday 6.[6] Start Time: ~~0942~~ 1125	Tuesday 6.[6] Start Time: 0920	Wednesday 6.[6] Start Time: 0911	Thursday 6.[6] Start Time: 1205	Friday 6.[6] Start Time: _____	Saturday 6.[6] Start Time: _____	Sunday 6.[6] Start Time: _____
TA-54-231	AM 4/20/15						
Calibrated Infrared Thermometer (4.2.1[1][B])	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.[7])	57.2 °F	52.6 °F	57.3 °F	64.5 °F	_____ °F	_____ °F	_____ °F
Container ID #	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
S818435	57.4	54.9	58.2	65.3			
S802833	56.6	54.0	57.4	64.3			
S801676	56.3	54.0	57.3	67.9			
S816810	56.2	55.1	56.6	67.0			
70069	56.2	54.8	56.2	63.0			
S822844	56.2	55.1	56.9	63.1			
S825879	56.6	55.2	56.8	63.5			
S793724	56.4	55.4	56.8	63.1			
S813545	56.4	55.0	58.0	64.1			
S822713	56.4	54.6	57.6	62.7			
S802739	56.8	54.0	57.3	65.0			
69907	56.5	53.6	57.0	63.2			
S804995	57.2	54.0	58.0	64.8			
S816434	58.2	55.8	59.0	65.3			

ATTACHMENT 2
Page 2 of 3

6.[6] Date: From _____ to _____

Container ID #	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	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)							
S805289	58.0	54.7	58.8	65.2			
S862888	56.8	54.2	57.8	63.5			
70072	56.7	54.1	57.5	63.8			
S823184	57.2	54.8	57.7	65.1			
S822599	57.2	55.2	57.5	64.4			
69904	56.7	55.3	57.0	63.0			
S805051	56.4	55.4	56.7	63.1			
S864213	56.4	55.6	56.5	63.1			
S853714	56.4	55.3	56.6	63.6			
S803078	56.5	54.9	56.6	64.4			
S825878	56.7	55.6	56.9	63.9			
S823124	56.7	55.0	57.0	64.0			
S804948	57.2	55.2	58.1	64.1			
S813385	57.7	55.9	58.3	65.4			
S842446	57.8	55.9	59.1	65.6			
Ambient Temperature (6.[13])	56.4 °F 1127 4/20/15	53.7 °F	57.2 °F	64.9 °F	_____ °F	_____ °F	_____ °F
End Time (6.[14])	~~0952~~	0922	0915	1211			
6.[14]	Operator: Operator: TV	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: _____ Operator: _____	Operator: _____ Operator: _____	Operator: _____ Operator: _____

ATTACHMENT 2
Page 3 of 3

6.[6] Date: From _____ to _____

6.[2] Comments: _____

6.[18] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Alfredo Aguilar / Tina Aguirre	Alfredo Aguilar / Tina Aguirre	293178 / 174977	AA / TA	4/20/15 / 4-20-15
Thomas Vigil	Thomas Vigil	123682	TV	4/20/15
Alfredo Aguilar	Alfredo Aguilar	293178	AA	4/21/15
Thomas Vigil	Thomas Vigil	123682	TV	4/21/15
Alfredo Aguilar	Alfredo Aguilar	293178	AA	4/22/15
Thomas Vigil	Thomas Vigil	123682	TV	4/22/15
Thomas Vigil	Thomas Vigil	123682	TV	4/23/15

Operator (print)	Signature	Z#	Initials	Date
Alfredo Aguilar	Alfredo Aguilar	293178	AA	4/23/15

9.1[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 042015 to 042615

	Monday 6.[6] Start Time: ~~0954~~ 042015 0948 PM	Tuesday 6.[6] Start Time: 1008	Wednesday 6.[6] Start Time: 1006	Thursday 6.[6] Start Time: 1206 ~~1006~~	Friday 6.[6] Start Time:	Saturday 6.[6] Start Time:	Sunday 6.[6] Start Time:
TA-54-375 Cell 1							
Calibrated Infrared Thermometer (4.2.1[1][B])	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 ____	Brand: ____ Model: ____ Cal. Due Date: ____ File Number ____
Ambient Temperature (6.[7])	53.7 °F	56.7 °F	60.5 °F	64.2 °F	____ °F	____ °F	____ °F
Container ID #	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
68685	54.5	56.3	60.5	63.8			
LA00000070503 68540	54.5	56.3	60.5	63.9			
LA00000070503 68553	54.3	56.2	60.7	64.7			
69445	54.7	56.3	60.8	64.1			
69618	54.2	55.9	60.0	63.6			
69013	54.6	56.4	60.0	63.2			
LASB50522	55.6	57.0	60.6	63.3			
LASB50452	55.6	57.0	60.5	63.5			
LASB50431	55.5	56.9	60.3	63.2			
LASB50069	54.9	56.8	60.0	63.2			
LASB50073	54.3	56.8	60.1	62.5			
69636	55.5	56.7	59.9	63.5			
69616	55.5	57.0	60.3	63.0			
69417	55.5	56.9	60.6	62.9			

ATTACHMENT 3
Page 2 of 3

6.[6] Date: From 042015 to 042615

Container ID #	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	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 (continued)							
69620	55.3	56.5	59.9	62.9			
69520	55.1	56.9	60.1	62.6			
69641	55.6	57.1	60.4	63.0			
69298	55.3	57.2	60.8	63.5			
LASB02203	55.7	56.9	60.4	62.6			
Ambient Temperature (6.[13])	54.3 °F	56.2 °F	60.3 °F	63.7 °F	____ °F	____ °F	____ °F
End Time (6.[14])	0955	1013	1012	1230			
6.[14]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

6.[2] Comments:

ATTACHMENT 3
Page 3 of 3

6.[6] Date: From 042015 to 042615

6.[18] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Tina Aguirre	Tina Aguirre	n49nAA		4-20-15
Joshua Lopez	Joshua Lopez	116598	JL	042015
Tina Aguirre	Tina Aguirre	n49nAA		042115
Joshua Lopez	Joshua Lopez	116598	JL	042115 042115
Tina Aguirre	Tina Aguirre	n49nAA		042215
Joshua Lopez	Joshua Lopez	116598	JL	042215
Tina Aguirre	Tina Aguirre	n49nAA		042315

Operator (print)	Signature	Z#	Initials	Date
Joshua Lopez	Joshua Lopez	116598	JL	042315
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/

9.1[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 4-20-15 to 4-26-15

	Monday 6.[6] Start Time: 0956	Tuesday 6.[6] Start Time: 1014	Wednesday 6.[6] Start Time: 1013	Thursday 6.[6] Start Time: 1231	Friday 6.[6] Start Time:	Saturday 6.[6] Start Time:	Sunday 6.[6] Start Time:
TA-54-375 Cell 2							
Calibrated Infrared Thermometer (4.2.1[1][B])	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: 061215 File Number 101912	Brand: Fluke Model: 561 Cal. Due Date 061215 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.[7])	55.7 °F	57.0 °F	60.0 °F	61.6 °F	°F	°F	°F
Container ID #	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
LASB02198	56.1	57.1	59.4	62.0			
68638	56.6	56.6	59.7	62.3			
69615	55.4	56.7	59.9	62.6			
69635	56.0	57.1	60.0	63.2			
69642	55.8	56.9	60.0	62.9			
69630	56.4	57.0	60.0	62.8			
69633	56.3	58.1	60.0	62.5			
68430	56.4	57.7	60.2	62.7			
68631	55.7	56.8	59.8	62.6			
69634	55.7	57.7	60.6	62.0			
68567	55.9	57.4	59.4	62.9			
94227	55.7	57.4	59.7	62.1			
LASB50442	56.5	57.1	60.1	62.8			
69644	56.5	~~58.2~~ 56.8	59.9	62.7			
LASB50443	56.1	57.1	59.4	62.9			
69638	56.9	57.5	59.6	62.7			

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6.[6] Date: From 042015 to 042615

Container ID #	Monday Temp (°F) (6.[8]/6.[9])	Tuesday Temp (°F) (6.[8]/6.[9])	Wednesday Temp (°F) (6.[8]/6.[9])	Thursday Temp (°F) (6.[8]/6.[9])	Friday Temp (°F) (6.[8]/6.[9])	Saturday Temp (°F) (6.[8]/6.[9])	Sunday Temp (°F) (6.[8]/6.[9])
TA-54-375 Cell 2 (continued)							
68624	56.6	58.7	60.0	63.1			
68507	56.6	57.5	60.3	62.5			
69568	56.8	57.0	59.9	62.0			
69553	56.4	56.9	59.5	61.7			
69598	56.1	56.8	59.4	61.5			
LASB50559	56.1	QA 4-21-15 ~~57.3~~ 57.3	59.7	61.9			
69015	56.8	58.0	59.9	62.5			
69639	57.3	58.2	60.0	62.8			
69637	56.9	57.8	59.6	62.8			
Ambient Temperature (6.[13])	042015 55.4 °F	57.2 °F	60.2 °F	61.5 °F	____ °F	____ °F	____ °F
End Time (6.[14])	1002 QA ~~0944~~ 1003	1019	1019	1235			
6.[14]	Operator: 042015 Operator:	Operator: TA Operator:	Operator: TA Operator:	Operator: Operator:	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

6.[2] Comments:

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6.[6] Date: From 042015 to 042615

6.[18] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Tina Aguirre	Tina Aguirre	114927	MM	4-20-15
Joshua Lopez	Joshua Lopez	116598	JL	042015
Tina Aguirre	Tina Aguirre	114927	MM	042115
Joshua Lopez	Joshua Lopez	116598	JL	042115
Tina Aguirre	Tina Aguirre	114927	MM	042215
Joshua Lopez	Joshua Lopez	116598	JL	042215
Tina Aguirre	Tina Aguirre	114927	MM	042315

Operator (print)	Signature	Z#	Initials	Date
Joshua Lopez	Joshua Lopez	116598	JL	042815
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/

9.1[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 042015 to 042615

	Monday 6.[6] Start Time: 0941	Tuesday 6.[6] Start Time: 1003	Wednesday 6.[6] Start Time: 1000	Thursday 6.[6] Start Time: 1221	Friday 6.[6] Start Time:	Saturday 6.[6] Start Time:	Sunday 6.[6] Start Time:
TA-54-375 Cell 3							
Calibrated Infrared Thermometer (4.2.1[1][B])	Brand: Fluke Model: 561 Cal. Due Date: 061215 File Number 101916	Brand: Fluke Model: 561 Cal. Due Date: 061215 File Number 101916	Brand: Fluke Model: 561 Cal. Due Date 061215 File Number 101916	Brand: Fluke Model: 561 Cal. Due Date 061215 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.[7])	54.4 °F	56.8 °F	60.3 °F	63.0 °F	°F	°F	°F
Container ID #	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
69519	56.2	57.6	60.7	62.7			
69645	56.3	57.7	60.7	62.7			
94068	56.4	57.5	60.4	62.8			
93605	56.1	57.3	61.0	63.5			
69548	56.1	57.1	60.5	63.1			
69604	56.3	57.6	60.4	63.0			
LASB50529	55.5	57.8	60.5	63.0			
LASB50418	~~55.9~~ 56.6	58.2	61.0	63.3			
69036	~~56.1~~ ~~55.5~~	57.2	60.7	63.2			
LASB50451	55.9	57.8	60.3	63.3			
69559	55.9	57.1	60.5	61.3			
LASB50448	55.9	56.9	60.6	62.8			
87823	55.9	56.8	61.2	61.8			
87825	55.7	56.7	61.2	63.5			
87826	55.4	56.6	61.3	61.6			
87827	55.4	56.7	61.3	61.2			

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6.[6] Date: From 042015 to 042615

Container ID #	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
TA-54-375 Cell 3 (continued)							
Ambient Temperature (6.[13])	~~53~~ [initials] 042015 55.4 °F	56.5 °F	60.5 °F	62.4 °F	°F	°F	°F
End Time (6.[14])	0947	1007	1005	1225			
6.[14]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: Operator:	Operator: Operator:	Operator: Operator:

6.[2] Comments:

ATTACHMENT 5
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6.[18] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Tina Aguirre	Tina Aguirre	174977	DA	4-20-15
Joshua Lopez	Joshua Lopez	116598	JL	042015
Tina Aguirre	Tina Aguirre	174977	DA	042115
Joshua Lopez	Joshua Lopez	116598	JL	042115
Tina Aguirre	Tina Aguirre	174977	DA	042215
Joshua Lopez	Joshua Lopez	116598	JL	042215
Tina Aguirre	Tina Aguirre	174977	DA	042315

Operator (print)	Signature	Z#	Initials	Date
Joshua Lopez	Joshua Lopez	116598	JL	042315
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/

9.1[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 4-23-15 to 4-23-15 Location: 375

	Start Time: 6.[6] 0645	Start Time: 6.[6] 0728	Start Time: 6.[6] 0829	Start Time: 6.[6] 0926	Start Time: 6.[6] 1028	Start Time: 6.[6] 1120	Start Time: 6.[6] 1231	Start Time: 6.[6] 1326	Start Time: 6.[6] 1427	Start Time: 6.[6] 1524	Start Time: 6.[6] 1625	Start Time: 6.[6] 1718	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer (4.2.1[1][B])	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[7])	57.37 °F	53.00	52.83	54.58	57.28	60.18	61.80	62.18 °F	63.24	63.27	63.75 °F	62.72	°F	°F
Container ID # (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
68685 T1	52.11	53.95	53.46	55.06	57.59	60.1	62.43	62.95	64.17	64.51	64.56	63.4		
68685 T2	51.57	53.56	53.06	54.59	57.08	59.32	61.56	62.13	63.04	63.53	63.76	62.78		
50522 T4	53.1	54.25	53.96	55.05	56.93	58.85	60.30	60.56	61.36	61.79	61.92	61.33		
50522 T5	52.86	54.17	53.83	55.18	57.03	58.91	60.47	60.62	61.42	61.85	61.98	61.42		
							N/A							

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6.[6] Date: From 4-23-15 to 4-23-15 Location: 375

Container ID # (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
							N/A								
Ambient Temperature (6.[13])	51.37°F	52.98	52.83	54.59	57.31°F	60.23	61.89	62.21°F	63.30	63.70	63.95	62.60		°F	°F
End Time (6.[14])	0645	0729	0830	0927	1029	1121	1232	1327	1428	1525	1626	1719			
6.[14]	Operator: DA / Operator: [illegible]	Operator: DA / Operator: [illegible]	Operator: DA / Operator: [illegible]	Operator: DA / Operator: [illegible]	Operator: DA / Operator: [illegible]	Operator: DA / Operator: [illegible]	Operator: DA / Operator: [illegible]	Operator: DA / Operator: [illegible]	Operator: DA / Operator: [illegible]	Operator: CL / Operator: CL	Operator: DA / Operator: CL	Operator: CL / Operator: CL	Operator: / Operator:	Operator: / Operator:

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6.[6] Date: From 4-23-15 to 4-23-15 Location: 325

6.[2] Comments: N/A

6.[18] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Tina Aguirre	[signature]	124977	TA	042315
Joshua Lopez	[signature]	116578	JL	042315
Chris Carman	[signature]	120097	CC	4/23/15
N/A				

9.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
Robert V Harden	[signature]	122493	RVH	4-23-15

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

6.[6] Date: From 4-23-15 to 4-~~23~~-15 (24 hr 4-23-15) Location: 375

	Start Time: 6.[6] 1830	Start Time: 6.[6] 1928	Start Time: 6.[6] 2032	Start Time: 6.[6] 2129	Start Time: 6.[6] 2229	Start Time: 6.[6] 2330	Start Time: 6.[6] 0026	Start Time: 6.[6] 0126	Start Time: 6.[6] 0226	Start Time: 6.[6] 0327	Start Time: 6.[6] 0426	Start Time: 6.[6] 0521	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer (4.2.1[1][B])	Brand: Model: NA Cal. Due Date: File Number	Brand: Model: NA Cal. Due Date: File Number	Brand: Model: NA Cal. Due Date: File Number	Brand: Model: NA Cal. Due Date: File Number	Brand: Model: NA Cal. Due Date: File Number	Brand: Model: NA Cal. Due Date: File Number	Brand: Model: NA Cal. Due Date: File Number	Brand: Model: NA Cal. Due Date: File Number	Brand: Model: NA Cal. Due Date: File Number	Brand: Model: NA Cal. Due Date: File Number	Brand: Model: NA Cal. Due Date: File Number	Brand: Model: NA Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[7])	60.05 °F	58.68 °F	59.04 °F	58.25 °F	57.76 °F	57.14 °F	56.62 °F	55.36 °F	54.24 °F	53.79 °F	53.57 °F 0424	53.60 °F	°F	°F
Container ID # (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
68685 T1	60.47	59.0	59.05	58.12	57.52	56.93	56.49	55.28	54.25	53.87	53.57	53.73		NA
68685 T2	60.26	58.77	58.57	57.56	57.11	56.48	56.04	54.77	53.80	53.47	53.31	53.36		
50522 T4	59.30	58.32	58.44	57.85	57.52	57.03	56.70	55.79	54.96	54.64	54.46	54.41		
50522 T5	59.45	58.44	58.5	57.83	57.42	56.89	56.56	55.77	54.76	54.49	54.34	54.32		
								NA						

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6.[6] Date: From 4-23-15 to 4-24-15 QA 4-23-15 Location: 375

Container ID # (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
								N/A						
Ambient Temperature (6.[13])	60.05 °F	58.68 °F	59.06 °F	58.25 °F	57.76 °F	57.14 °F	56.62 °F	55.36 °F	54.24 °F	53.79 °F	53.57 °F	53.60 °F	____ °F	____ °F
End Time (6.[14])	1830	1928	2033	2129	2229	2330	0026	0126	0226	0327	0427	0522		1
6.[14]	Operator: WJC / Operator: NS	Operator: WJC / Operator: NS	Operator: NS / Operator: WJC	Operator: WJC / Operator: JJV	Operator: JJV / Operator: WJC	Operator: WJC / Operator: JJV	Operator: WJC / Operator: JJV	Operator: JJV / Operator: WJC	Operator: JJV / Operator: WJC	Operator: WJC / Operator: JJV	Operator: JJV / Operator: [illegible]	Operator: JJV / Operator: [illegible]	Operator: ____ / Operator: ____	Operator: ____ / Operator: ____

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6.[6] Date: From 4-23-15 to 4-24-15 Location: 375

6.[2] Comments: N/A

6.[18] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Willie J. Conti	[signature]	112507	[initials]	4-23-15
Norman Sanchez	[signature]	187818	NS	4-23-15
Jose Leo Lopez	[signature]	116578	[initials]	042315
N/A				

9.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
Eliot Velarde [illegible]	[signature]	114168	EC	4-24-15