From: Haagenstad, Mark P
Sent: Thursday, October 02, 2014 6:36 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; coleman.smith@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; 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; Beard, Carl Allen; Cabbil, Cheryl Denise; Young, Steven L; Erickson, Randy; Funk, David John; Alexander, Rick A
Subject: Daily Technical Submission - October 2, 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. 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

October 2, 2014

Participants:

- New Mexico Environment Department: Tim Hall, Leslie Dale, Greg Lauer, Siona Briley and Susan Lucas.
- LANL – Los Alamos Field Office: Lee Bishop and Karen Armijo.
- LANL – Los Alamos National Security: Alison Dorries, Don Allen, Randy Erickson, Tony Grieggs, Mark Haagenstad, Tammy Diaz and Luciana Vigil-Holterman.

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 days' daily temperature data (prior to the safety pause) attached.
- **Monitoring – Visual Inspections**
    - No changes have been observed. During safety pause, visual inspections were conducted from the windows outside the Permacon. Visual inspections within the PermaCon are anticipated to continue.
- **Monitoring – headspace gas (HSG)**
    - Containers (SWBs) 68685 and SB50522.
        - Daily head space gas (HSG) sample collection was temporarily paused on October 1, 2014 and was anticipated to resume after 6:00 PM today (see information below).
            - HSG data is anticipated to be collected after 6:00 PM today and will be provided in the Daily Technical Summary for tomorrow (October 3, 2014).
                - H_2, CO, CO_2 and N_2O
    - Other containers
        - A minimum of once per month HSG sampling will be conducted.
            - To date in October, LANL has conducted HSG sampling on 7 SWBs.
            - Note: LANL previously conducted HSG sampling on each of the 55 SWBs that contain 55-gallon drums of remediated nitrate salt-bearing waste (under Section I of the Isolation Plan).

- **Additional measures currently underway**
    - As a conservative measure, LANL is currently conducting additional monitoring. This additional monitoring includes:
        - Conservative measures have been paused during safety evaluation.
- **Anticipated Changes to Nitrate Salt-Bearing Waste Containers (e.g. movement, re-packaging).**
    - Currently, no further movements or re-packaging are planned.
- **Other:**

Safety Pause at Los Alamos National Laboratory TA-54 Dome 375 PermaCon (Remediated Nitrate Salts-Bearing Waste)

LANL representatives provided the following information regarding a safety pause at TA54, Dome 375 PermaCon today in two separate discussions (10am and 5pm) with NMED:

There has been no actual event or physical change to containers at Los Alamos. However, a worker involved in the analysis of remediated nitrate salt waste at TA-54, Area G, raised a safety concern about the reliability of external standard waste box temperature measurements as a timely indicator of internal drum temperature. The concern involves the possibility that workers in the immediate vicinity could be exposed to gases or radioactive contamination if a waste drum breached and the standard waste box seals failed sometime after the daily temperature measurement was made.

Workers' safety concerns are always taken seriously. Los Alamos management, using ISM principles, took the immediate conservative precautionary measure of pausing entry into the Dome 375 PermaCon where remediated nitrate salt-bearing waste containers were stored until the concern could be formally evaluated.

The Laboratory is using the ISM process to evaluate the concern, and hazard control measures are being implemented to ensure worker safety and the resumption of routine inspections as outlined in the Nitrate Salt-Bearing Waste Container Isolation Plan. Pending the completion of the formal evaluation, we are implementing worker respiratory protection and more frequent room air changes as an engineering control to mitigate this concern.

The FOD is working with operations and ESH to issue a standing order and revise procedures, if necessary, using our standard processes. The order will specify the changes to worker health and safety and PermaCon 375 entry requirements.

The impacts associated with this safety pause include temporary suspension of required monitoring (head space gas and temperature measurements) under the Isolation Plan, Rev. 2 (September 19, 2014). We anticipate that we will resume our routine surveillance activities in Dome 375 today, which would meet our surveillance commitments to NMED. However, we have notified NMED of the safety pause and the potential impact to the surveillance requirements. NMED made it clear that worker safety is also their highest priority.

Based on conversations with NMED during the 5pm phone call today, LANL /NNSA and NMED agreed that it was appropriate to resume inspection and monitoring pursuant to the Isolation Plan Revision 2 by implementing respiratory protection, described above.

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	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 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)
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

	Requested Information	Actionee	Status	Completion Date
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	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	In progress.Currently scheduled for 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	In progress	
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 anticipates submitting the first 100 out of 586 RTRs and documentation by Friday October 3, 2014	

Next Call: Tuesday October 7, 2014

ATTACHMENT 2
Page 1 of 3

TA-54 AREA G TA-54-231 NITRATE SALT TRU WASTE CONTAINER DAILY TEMPERATURE DATA SHEET

6.[6] Date: From 09/29/14 to 10/05/14

	Monday 6.[6] Start Time: 0950	Tuesday 6.[6] Start Time: 0943	Wednesday 6.[6] Start Time: 1120	Thursday 6.[6] Start Time: 1306 10/2/14	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: 7/24/15 File Number 101974	Brand: ~~Fluke~~ wm 10-1-14 Model: ~~561~~ wm 10-1-14 Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[9])	63.6 °F	56.9 °F	62.9 °F	°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	63.2	58.6	62.9				
S802833	63.0	56.3	62.1				
S801676	62.9	55.7	61.6				
S816810	62.6	55.5	62.0				
70069	62.2	54.3	61.2				
S822844	62.8	54.8	61.8				
S825879	62.7	53.8	62.5				
S793724	62.6	55.1	62.2				
S813545	62.4	55.7	61.1				
S822713	63.1	56.8	62.9				
S802739	63.2	55.9	62.4				
69907	62.9	56.2	61.8				
S804995	63.0	56.1	62.7				
S816434	63.2	57.0	63.3				

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INITIAL wm DATE 9-29-14

ATTACHMENT 2
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6.[6] Date: From 09/29/14 to 10/05/14

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	57.0	63.4				
S862888	63.0	56.3	62.8				
70072	62.9	55.8	62.5				
S823184	63.3	56.8	63.4				
S822599	63.1	56.4	62.9				
69904	62.5	55.3	61.8				
S805051	62.4	54.7	61.7				
S864213	62.5	54.9	62.1				
S853714	62.8	55.8	62.6				
S803078	63.0	55.5	63.5				
S825878	62.9	55.8	102.7				
S823124	63.0	56.1	62.8				
S804948	63.2	57.5	62.6				
S813385	63.4	56.6	63.9				
S842446	63.7	57.3	64.2				
Ambient Temperature (6.[14])	63.9 °F	57.8 °F	63.6 °F	_____ °F	_____ °F	_____ °F	_____ °F
End Time (6.[15])	0959	0955	1129				
6.[15]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: _____ Operator: _____	Operator: _____ Operator: _____	Operator: _____ Operator: _____	Operator: _____ Operator: _____

ATTACHMENT 2
Page 3 of 3

6.[6] Date: From 09/29/14 to 10/05/14

6.[2] Comments: _____

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Josephine Duran		151971	JD	9/29/14
Thomas Vigil		236382	tv	9/29/14
Josephine Duran		151971	JD	9/30/14
Alfredo Aguilar		293181	AA	9/30/14
Josephine Duran		151971	JD	10/01/14
Thomas Vigil		236382	tv	10/1/14

Operator (print)	Signature	Z#	Initials	Date

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 9-29-14 to ~~9-29-14~~ 10-5-14 WP 201458

	Monday 6.[6] Start Time: 10:45	Tuesday 6.[6] Start Time: 1225	Wednesday 6.[6] Start Time: 1307	Thursday 6.[6] Start Time:	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 101916	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	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[9])	64.7 °F	65.3 °F	66.0 °F	°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	63.8	63.9	65.7				
68540	64.9	63.8	65.3				
68553	65.0	63.5	65.9				
69445	64.3	64.4	66.3				
69618	64.4	64.0	65.5				
69013	64.0	63.5	65.2				
LASB50522	63.9	63.8	65.1				
LASB50452	64.0	63.8	65.3				
LASB50431	63.7	63.5	64.7				
LASB50069	63.8	63.4	64.9				
LASB50073	64.0	64.3	64.9				
69636	63.6	63.1	64.5				
69616	63.5	63.1	64.5				
69417	63.8	63.6	65.1				

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ATTACHMENT 3
Page 2 of 3

6.[6] Date: From 9-29-14 to 10-5-14

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	63.8	63.9	65.1				
69520	64.4	63.5	65.4				
69641	63.6	64.0	64.9				
69298	63.7	63.8	64.7				
LASB02203	63.6	63.3	64.6				
Ambient Temperature (6.[14])	64.3 °F	65.5 °F	66.2 °F	_____ °F	_____ °F	_____ °F	_____ °F
End Time (6.[15])	10:50	1231	1312				
6.[15]	Operator: JC Operator: WT	Operator: QA Operator: WT	Operator: QA Operator: JC	Operator: _____ Operator: _____	Operator: _____ Operator: _____	Operator: _____ Operator: _____	Operator: _____ Operator: _____

6.[2] Comments:

ATTACHMENT 3
Page 3 of 3

6.[6] Date: From 9-29-14 to 10-5-14

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
William Suarez		201458	WT	9-29-14
Jesse Chavez		214578	JC	9-29-14
Tina Aguirre		174977	TA	9-29-14
William Suarez		201458	WT	9-30-14
Tina Aguirre		174977	TA	9-30-14
Jesse Chavez		214578	JC	9-30-14
Jesse Chavez		214578	JC	10-1-14
Tina Aguirre		174977	TA	10-01-14
William Suarez		201458	WT	10-1-14

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 9-29-14 to 10-5-14

	Monday 6.[6] Start Time: 10:51	Tuesday 6.[6] Start Time: 1232	Wednesday 6.[6] Start Time: 1313	Thursday 6.[6] Start Time:	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: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[9])	62.5 °F	61.9 °F	63.1 °F	°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	62.6	61.7	62.5				
68638	63.2	62.9	63.4				
69615	63.5	62.4	64.1				
69635	63.1	63.0	64.4				
69642	63.3	63.4	64.6				
69630	63.2	63.3	64.3				
69633	63.1	62.8	63.6				
68430	62.7	62.5	63.4				
68631	62.8	62.2	63.2				
69634	62.6	62.1	62.7				
68567	62.7	61.7	62.9				
94227	62.8	61.8	63.2				
LASB50442	63.0	62.6	63.6				
69644	63.2	62.7	63.8				
LASB50443	63.3	62.4	63.5				
69638	63.8	62.3	63.7				

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ATTACHMENT 4
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6.[6] Date: From 9-29-14 to 10-5-14

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	67.5	62.5	63.6				
68507	63.0	61.8	63.5				
69568	63.5	61.9	63.6				
69553	62.8	62.0	63.7				
69598	62.9	62.6	63.8				
LASB50559	62.5	62.1	62.7				
69015	62.8	62.5	63.5				
69639	62.6	62.3	63.8				
69637	62.7	62.7	64.1				
Ambient Temperature (6.[14])	62.1 °F	62.1 °F	63.4 °F	____ °F	____ °F	____ °F	____ °F
End Time (6.[15])	10:55						
6.[15]	Operator: JC Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: JC	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

6.[2] Comments:

ATTACHMENT 4
Page 3 of 3

6.[6] Date: From 9-29-14 to 10-3-14

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
William Juarez		201458	WJ	9-29-14
Jesse Chavez		214578	JC	9-29-14
Tina Aguirre		174977	TA	9-29-14
Tina Aguirre		174977	TA	9-30-14
William Juarez		201458	WJ	9-30-14
Jesse Chavez		214578	JC	9-30-14
Jesse Chavez		214578	JC	10-1-14
Tina Aguirre		174977	TA	10-01-14
William Juarez		201458	WJ	10-1-14
	/			
	/			
	/			
	/			
	/			
	/			

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 9-29-14 to 10-5-14

	Monday 6.[6] Start Time: 10:58	Tuesday 6.[6] Start Time: 1239	Wednesday 6.[6] Start Time: 1306	Thursday 6.[6] Start Time:	Friday 6.[6] Start Time:	Saturday 6.[6] Start Time:	Sunday 6.[6] Start Time:
TA-54-375 Cell 3							
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: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[9])	63.9 °F	63.6 °F	64.8 °F	°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	63.3	63.1	63.8				
69645	63.5	63.2	64.8				
94068	63.6	63.3	64.2				
93605	63.7	63.6	64.4				
69548	63.6	63.7	65.4				
69604	64.0	64.4	64.4				
LASB50529	63.7	63.9	63.8				
LASB50418	63.6	62.8	64.1				
69036	64.1	63.5	64.7				
LASB50451	63.8	63.4	64.5				
69559	64.4	63.7	64.7				
LASB50448	64.7	63.8	64.5				
Ambient Temperature (6.[14])	64.2 °F	63.6 °F	65.2 °F	°F	°F	°F	°F
End Time (6.[15])	11:00	1241	1309				
6.[15]	Operator: JC Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: JC Operator: [illegible]	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

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INITIAL wm DATE 9-29-14

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6.[6] Date: From 9-29-14 to 10-5-14

6.[2] Comments:

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
William Juarez		201458	WJ	9-29-14
Jesse Chavez		214558	JC	9-29-14
Tina Aguirre		174977	TA	9-29-14
Tina Aguirre		174977	TA	9-30-14
William Juarez		201458	WJ	9-30-14
Jesse Chavez		214558	JC	9-30-14
Jesse Chavez		214558	JC	10-1-14
Tina Aguirre		174977	TA	10-01-14
William Juarez		201458	WJ	10-1-14
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/

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 10-01-14 to 10-01-14 Location: 375

	Start Time: 6.[6] 0628	Start Time: 6.[6] 0729	Start Time: 6.[6] 0828	Start Time: 6.[6] 0929	Start Time: 6.[6] 1031	Start Time: 6.[6] 1129	Start Time: 6.[6] 1228
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: 61215 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 61215 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 61215 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 61215 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 61215 File Number 101915
Ambient Temperature (6.[9])	50.4 °F	50.8 °F	50.4 °F	53.7 °F	57.8 °F	62.8 °F	65.3 °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])
68685	50.2	49.8	50.0	52.7	56.1	66.6	65.5
50522	51.5	50.8	51.5	54.0	56.9	61.5	64.5

	Start Time: 6.[6] 1323	Start Time: 6.[6] 1429	Start Time: 6.[6] 1525	Start Time: 6.[6] 1625	Start Time: 6.[6] 1725	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer (6.[7])	Brand: Fluke Model: 561 Cal. Due Date: 61215 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 61215 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 61215 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 61215 File Number 101915	Brand: Fluke Model: 561 Cal. Due Date: 61215 File Number 101915	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[9])	66.6 °F	66.7 °F	68.1 °F	67.5 °F	67.4 °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])
68685	66.6	66.4	67.5	68.7	68.2		
50522	65.5	65.4	63.2	66.4	65.8		

N/A

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6.[6] Date: From 10-01-14 to 10-01-14 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])
							N/A	N/A					N/A	N/A
Ambient Temperature (6.[14])	50.3 °F	50.5 °F	50.7 °F	53.8 °F	58.2 °F	63.7 °F	65.9	66.5 °F	66.8 °F	68.3	67.9 °F	67.7 °F	____ °F	____ °F
End Time (6.[15])	0629	0730	0829	0950	1032	1130	1229	1329	1430	1526	1626	1726		
6.[15]	Operator: DA / Operator: WS	Operator: DA / Operator: JC	Operator: WS / Operator: JC	Operator: JC / Operator: WS	Operator: WS / Operator: JC	Operator: DA / Operator: WS	Operator: DA / Operator: WS	Operator: JC / Operator: JC	Operator: DA / Operator: WS	Operator: DA / Operator: WS	Operator: DA / Operator: WS	Operator: DA / Operator: WS	Operator: / Operator:	Operator: / Operator:

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6.[6] Date: From 10-01-14 to 10-01-14 Location: 375

6.[2] Comments: None

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Tina Aguirre	Tina Aguirre	121458	TA	10-1-14
Jesse Chavez	Jesse Chavez	121458	JC	10-1-14
William Tarr	William Tarr	121458	WT	10-1-14

Operator (print)	Signature	Z#	Initials	Date

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
Robert L Harder	Robert Harder	121493	RLH	10-1-14

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

6.[6] Date: From 10-1-14 to 10-2-14 Location: DOME 375

	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer (6.[7])	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[9])	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°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])

N/A

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6.[6] Date: From 10-1-14 to 10-2-14 Location: Dome 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])
						N/A								
Ambient Temperature (6.[14])	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F	_____°F
End Time (6.[15])	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
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: _____

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6.[6] Date: From 10-1-14 to 10-2-14 Location: Dome 375

6.[2] Comments: 1740 - NO ENTRY INTO 375 PERMACON WITHOUT F.O.D. APPROVAL - COULD NOT TAKE HOURLY TEMPS

N/A

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Gary Mally	Gary Mally	226775	GM	10-1-14

N/A

Operator (print)	Signature	Z#	Initials	Date

N/A

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
Robert V Wardell	Robert V Wardell	224938	RVW	10-2-14