From: Haagenstad, Mark P
Sent: Friday, October 10, 2014 5:24 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; Frederici, Dave
Subject: Daily Technical Submission - October 10, 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 note: Routine reporting of Head Space Gas (HSG) and Temperature Data for October 10, 2014 will be provided in a separate email/document by David Frederici later today.

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 10, 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 days' daily 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.
      - October 10, 2014 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 October, LANL has conducted HSG sampling on 32 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:
    - Containers (SWB) 68685 and SB50522.
      - LANL continuing *solid phase micro-extraction*.
      - Hourly temperature measurements are currently being performed on SWB 68685 and SB50522.
    - Five (5) other SWB overpacks (containing 55-gallon drums of remediated nitrate salt-bearing waste).
      - Continue twice-weekly HSG sample collection.
        - October 10, 2014 HSG data attached.

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

- **Other:**
    - LA-CIN01-001Drums Discardable Waste Forms Part 2 Delivered to the NMED on October 10, 2014.
    - Reminders:
        - There will be no technical summary provided on Monday, October 13, 2014 as it is a holiday. Summaries will resume on Tuesday, October 14, 2014. All Isolation Plan requirements will resume during the holiday break.
        - The technical call for Tuesday, October 14, 2014 is canceled due to a scheduled meeting with the NMED. The next call is scheduled for Thursday, October 16, 2014.

Summary Chart - Requested Information / Pending Issues:

	Requested Information	Actionee	Status	Completion Date
1.	NMED contact / process for LANL to notify NMED under the Revised Isolation Plan (e.g., 24 hour notices).	NMED	---	Complete June 5, 2014
2.	Keep NMED informed on the status of 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) October 8, 2014 (Twelfth 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 will submit this documentation in batches as it is becomes available.	Submitted 100 out of 586 RTRs and documentation on October 3, 2014.
39.	NMED requested a diagram of the location of the thermocouples on 68685 and SB50522	LANL	In progress	
40.	NMED requested a copy of the safety basis document for remediation planning when it is finalized.	LANL	Document is currently in Draft.	

Next Call: Thursday, October 16, 2014

Routine reporting of Head Space Gas (HSG) and Temperature Data for October 10, 2014 will be provided in a separate email/document.

Remediated Nitrate Salt Container Headspace Gas Analysis

	68685				SB50522				68567				69013				69618			
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**
10/10/14	127	880	19209	5965	5305	379	49464	923	25	0	1006	119	22	0	1212	107	92	0	858	187

Remediated Nitrate Salt Container Headspace Gas Analysis

	69634				SB02198			
Date	**H_2 ppm**	**CO ppm**	**CO_2 ppm**	**N_2O ppm**	**H_2 ppm**	**CO ppm**	**CO_2 ppm**	**N_2O ppm**
10/10/14	83	0	1153	574	2173	143	940	290

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 10/06/14 to 10/12/14

	Monday 6.[6] Start Time: 1002	Tuesday 6.[6] Start Time: 0905	Wednesday 6.[6] Start Time: 0924	Thursday 6.[6] Start Time: 0918	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 10/6/14 JW 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])	58.0 °F	55.5 °F	58.1 °F	60.7 °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	58.5	56.3	59.3	60.0			
S802833	58.4	55.8	58.5	59.6			
S801676	57.7	55.5	58.1	59.7			
S816810	57.5	54.6	57.1	58.4			
70069	56.7	54.3	57.0	58.2			
S822844	57.5	54.5	57.5	58.1			
S825879	57.4	54.6	57.3	58.2			
S793724	57.4	54.7	57.6	58.5			
S813545	57.1	55.5	57.5	58.6			
S822713	58.5	55.7	58.6	dmm ~~58~~ 59.5			
S802739	58.1	55.4	58.5	59.6			
69907	58.0	55.3	58.6	59.4			
S804995	58.6	55.9	59.1	59.6			
S816434	58.9	56.6	59.5	60.6			

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ATTACHMENT 2
Page 2 of 3

6.[6] Date: From 10/06/14 to 10/12/14

Container ID #	Monday Temp (°F) (6.[10]/6.[11])	Tuesday Temp (°F) (6.[10]/6.[11])	Wednesday Temp (°F) (6.[10]/6.[11])	Thursday Temp (°F) (6.[10]/6.[11])	Friday Temp (°F) (6.[10]/6.[11])	Saturday Temp (°F) (6.[10]/6.[11])	Sunday Temp (°F) (6.[10]/6.[11])
TA-54-231 (continued)							
S805289	59.0	56.6	59.4	60.1			
S862888	58.6	55.9	59.1	60.0			
70072	58.2	55.8	58.5	59.4			
S823184	58.8	55.7	58.9	59.6			
S822599	58.7	55.6	58.8	59.2			
69904	57.3	54.9	57.6	58.5			
S805051	~~57.2~~ 57.2	54.4	57.4	58.2			
S864213	57.3	54.5	57.8	58.1			
S853714	57.6	55.0	57.7	58.5			
S803078	58.3	55.1	58.1	58.6			
S825878	58.2	55.0	57.8	58.7			
S823124	58.0	55.2	58.1	58.8			
S804948	59.2	56.1	59.0	59.1			
S813385	58.6	56.7	59.3	59.9			
S842446	59.8	57.5	60.1	61.5			
Ambient Temperature (6.[14])	58.6 °F	56.0 °F	58.9 °F	59.7 °F	____ °F	____ °F	____ °F
End Time (6.[15])	1015	0935	0934	0928			
6.[15]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

ATTACHMENT 2
Page 3 of 3

6.[6] Date: From 10/06/14 to 10/12/14

6.[2] Comments: _____

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Josephine Duran		151971	pd	10/06/14
Thomas Vigil		236382	tv	10/3/14
Alfredo Aguilar		293178	AA	10/7/14
Thomas Vigil		236382	tv	10/7/14
Josephine Duran		151971	pd	10/8/14
Thomas Vigil		236382	tv	10/8/14
Josephine Duran		151971	pd	10/9/14
Thomas Vigil		236382	tv	10/9/14
Operator (print)	Signature	Z#	Initials	Date
Operator (print)	Signature	Z#	Initials	Date
Operator (print)	Signature	Z#	Initials	Date
Operator (print)	Signature	Z#	Initials	Date
Operator (print)	Signature	Z#	Initials	Date
Operator (print)	Signature	Z#	Initials	Date
Operator (print)	Signature	Z#	Initials	Date

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date

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 10-6-14 to 10-12-14

	Monday 6.[6] Start Time: 1634	Tuesday 6.[6] Start Time: 1012	Wednesday 6.[6] Start Time: 1010	Thursday 6.[6] Start Time: 0958	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])	69.2 °F	60.7 °F	62.8 °F	59.7 °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	69.9	61.2	61.6	60.1			
68540	69.7	59.9	61.9	59.4			
68553	69.4	59.9	61.2	59.6			
69445	70.1	60.3	61.5	60.8			
69618	69.1	60.0	61.4	59.9			
69013	68.7	60.1	61.4	60.0			
LASB50522	68.3	60.5	62.4	59.8			
LASB50452	68.1	60.4	61.4	60.2			
LASB50431	67.9	60.1	61.6	60.2			
LASB50069	68.7	60.2	61.6	60.3			
LASB50073	68.3	60.1	61.6	60.2			
69636	68.8	60.1	61.4	60.2			
69616	68.4	60.3	61.7	59.9			
69417	69.1	60.1	61.6	60.0			

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ATTACHMENT 3
Page 2 of 3

6.[6] Date: From 10-6-14 to 10-12-14

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	68.9	60.4	61.6	60.4			
69520	69.4	60.4	61.5	60.5			
69641	68.6	60.3	62.0	60.4			
69298	68.4	60.5	61.6	60.5			
LASB02203	68.5	60.5	62.0	60.4			
Ambient Temperature (6.[14])	69.0 °F	61.4 °F	63.2 °F	60.6 °F	____ °F	____ °F	____ °F
End Time (6.[15])	1643	1020	1021	1007			
6.[15]	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

6.[2] Comments: 68685 Thermocouple 70.0 Top; 68.1 Bottom 169840 10-6-14
68685 Thermal Top: 60.2 Bottom 59.9
68685 Thermal Cuple Top: 62.1° Bottom: 61.4 / 69618 Cuple west: 60.9° East: 61.2°
68685 Thermal Cuple Top: 59.5° Bottom: 59.5° / 50522 Cuple West: 59.8° East: 59.6

ATTACHMENT 3
Page 3 of 3

6.[6] Date: From 10-6-14 to 10-12-14

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Juan Garcia	Juan Garcia	169840	JG	10-6-14
Joshua Lopez	Joshua Lopez	116598	JL	100614
Thomas Vigil	Thomas Vigil	236382	TV	10/7/14
Joshua Lopez	Joshua Lopez	116598	JL	100714
Thomas Vigil	Thomas Vigil	236382	TV	10/8/14
Joshua Lopez	Joshua Lopez	116598	JL	100814
Josephine Duran	Josephine Duran	158771	JD	10/9/14
Joshua Lopez	Joshua Lopez	116598	JL	100914

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 10-6-14 to 10-12-14

	Monday 6.[6] Start Time: 1644	Tuesday 6.[6] Start Time: 1002	Wednesday 6.[6] Start Time: 1622	Thursday 6.[6] Start Time: 1009	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])	66.7 °F	60.0 °F	61.8 °F	60.8 °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	66.3	58.9	61.0	60.6			
68638	66.9	59.0	61.0	60.5			
69615	67.7	58.9	61.2	60.3			
69635	67.9	59.5	61.6	60.9			
69642	68.2	59.3	61.6	60.5			
69630	67.5	59.6	61.8	60.5			
69633	67.6	59.5	61.7	60.7			
68430	66.9	59.3	61.4	60.4			
68631	67.4	59.0	61.5	60.2			
69634	65.7	59.2	61.4	60.4			
68567	65.9	58.9	61.0	60.1			
94227	66.5	59.2	61.5	60.3			
LASB50442	67.0	60.0	61.6	60.5			
69644	66.8	59.6	61.7	60.4			
LASB50443	66.8	59.4	61.5	60.0			
69638	67.3	59.4	61.4	60.2			

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ATTACHMENT 4
Page 2 of 3

6.[6] Date: From 10-6-14 to 10-12-14

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	67.2	59.5	61.6	60.1			
68507	66.9	59.5	61.8	61.5			
69568	66.3	59.4	61.5	60.4			
69553	66.4	59.4	61.4	60.1			
69598	65.9	59.3	61.2	60.1			
LASB50559	66.3	59.8	62.0	60.5			
69015	67.6	60.0	61.9	60.7			
69639	67.2	59.7	61.7	60.6			
69637	67.5	59.7	61.7	60.3			
Ambient Temperature (6.[14])	66.1 °F	60.4 °F	62.4 °F	60.7 °F	____ °F	____ °F	____ °F
End Time (6.[15])	1649	1011	1031	1014			
6.[15]	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 4
Page 3 of 3

6.[6] Date: From 10-6-14 to 10-12-14

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Juan Garcia	Juan Garcia	169840	JG	10-6-14
Joshua Lopez	Joshua Lopez	116598	JL	100614
THOMAS VIGIL	TV	236382	TV	10/7/14
Joshua Lopez	Joshua Lopez	116598	JL	100714
THOMAS VIGIL	TV	236382	TV	10/8/14
Joshua Lopez	Joshua Lopez	116598	JL	100814
Josephine Duran	JD	151971	JD	10/09/14
Joshua Lopez	Joshua Lopez	116598	JL	100914

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date

ATTACHMENT 5
Page 1 of 2

TA-54 AREA G TA-54-375 CELL 3 NITRATE SALT TRU WASTE CONTAINER DAILY TEMPERATURE DATA SHEET

6.[6] Date: From 10-6-14 to 10-12-14

	Monday 6.[6] Start Time: 1628	Tuesday 6.[6] Start Time: 0853	Wednesday 6.[6] Start Time: 0959	Thursday 6.[6] Start Time: 0952	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 10191716 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])	67.5 °F	60.2 °F	61.7 °F	61.0 °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	67.1	60.1	61.6	60.8			
69645	67.1	60.3	61.7	61.2			
94068	67.5	60.2	62.0	61.4			
93605	67.5	60.8	62.2	61.7			
69548	67.8	60.4	62.0	61.7			
69604	67.6	60.4	62.1	61.7			
LASB50529	67.3	60.2	61.7	61.3			
LASB50418	67.4	60.1	61.5	61.2			
69036	67.8	60.1	61.5	61.1			
LASB50451	67.8	60.2	61.8	61.3			
69559	68.0	60.3	62.0	61.3			
LASB50448	68.6	60.9	62.1	61.4			
Ambient Temperature (6.[14])	67.6 °F	60.8 °F	62.8 °F	61.3 °F	°F	°F	°F
End Time (6.[15])	1633	1000	1007	0958			
6.[15]	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

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Z# 219908

ATTACHMENT 5
Page 2 of 2

6.[6] Date: From 10-6-14 to 10-12-14

6.[2] Comments:

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Juan Garcia	Juan Garcia	1169840	JG	10-6-14
Joshua Lopez	Joshua Lopez	116598	JL	100614
THOMAS VIGIL		236382	TV	10/7/14
Joshua Lopez	Joshua Lopez	116598	JL	100714
THOMAS VIGIL		236382	TV	10/8/14
Joshua Lopez	Joshua Lopez	116598	JL	100814
Josephine Duran		151974	JD	10/9/14
Joshua Lopez	Joshua Lopez	116598	JL	100914

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date

ATTACHMENT 6
Page 1 of 3

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

6.[6] Date: From 10-9-14 to 10-9-14 Location: 375

	Start Time: 6.[6] 0631	Start Time: 6.[6] 0728	Start Time: 6.[6] 0830	Start Time: 6.[6] 0927	Start Time: 6.[6] 1029	Start Time: 6.[6] 1127	Start Time: 6.[6] 1229	Start Time: 6.[6] 1329	Start Time: 6.[6] 1426	Start Time: 6.[6] 1531	Start Time: 6.[6] 1630	Start Time: 6.[6] 1729	Start Time: 6.[6] N/A	Start Time: 6.[6] N/A
Calibrated Infrared Thermometer (6.[7]) P	Brand: Model: N/A Cal. Due Date: File Number	Brand: Model: N/A Cal. Due Date: File Number	Brand: Model: N/A Cal. Due Date: File Number	Brand: Model: N/A Cal. Due Date: File Number	Brand: Model: N/A Cal. Due Date: File Number	Brand: Model: N/A Cal. Due Date: File Number	Brand: Model: N/A Cal. Due Date: File Number	Brand: Model: N/A Cal. Due Date: File Number	Brand: Model: N/A Cal. Due Date: File Number	Brand: Model: N/A Cal. Due Date: File Number	Brand: Model: N/A Cal. Due Date: File Number	Brand: Model: N/A Cal. Due Date: File Number	Brand: Model: N/A Cal. Due Date: File Number	Brand: Model: N/A Cal. Due Date: File Number
Ambient Temperature (6.[9]) T3	57.34 °F	57.29 °F	57.90 °F	58.92 °F	59.86 °F	62.0 °F	62.89 °F	62.87 °F	63.62 °F	63.46 °F	61.46 °F	60.49 °F	N/A °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 T1	57.08	57.05	57.62	58.59	59.46	61.51	63.09	63.39	64.09	62.09	60.93	59.89		
68685 T2	56.89	56.62	57.29	58.41	59.21	61.08	62.74	63.07	63.85	61.57	60.41	59.5		
50522 T4	57.57	57.47	57.87	58.71	59.3	60.78	61.93	61.82	62.49	61.33	60.62	59.83		
50522 T5	57.52	57.40	57.82	58.53	59.3	60.81	61.99	61.96	62.40	61.31	60.53	59.75		
							N/A						N/A	N/A

WORKING COPY
Z# 114186
INITIAL SC DATE 10-9-14

ATTACHMENT 6
Page 2 of 3

6.[6] Date: From 10.9.14 to 10.9.14 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])	Temp (°F) (6.[10]/6.[11])
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ambient Temperature (6.[14]) T3	57.40 °F	57.28	57.91 °F	58.95 °F	59.88 °F	62.09 °F	62.89 °F	62.92 °F	63.64 °F	63.36 °F	61.46 °F	60.49 °F	°F	°F		
End Time (6.[15])	0633	0728	0831	0928	1031	1128	1230	1330	1428	1531	1631	1730				
6.[15]	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: DA / Operator: [illegible]	Operator: [illegible] / Operator: SC	Operator: [illegible] / Operator: SC	Operator: / Operator:	Operator: / Operator:		

ATTACHMENT 6
Page 3 of 3

6.[6] Date: From 10-9-14 to 10-9-14 Location: 375

6.[2] Comments: NO entry into Permacon per standing order area G-50-1280RO hourly temps are taken using data logger computers.

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Tina Aguirre	Tina Aguirre	576927	DA	10-9-14
Jesse Chavez	Jesse Chavez	524578	JC	10-9-14
William Suarez	William Suarez	204558	WS	10-9-14

Operator (print)	Signature	Z#	Initials	Date

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
Pat O'Grady	Pat O'Grady	151358	JPO	10-9-14

ATTACHMENT 6
Page 1 of 3

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

6.[6] Date: From 100914 to 101014 Location: 375

	Start Time: 6.[6] 0629	Start Time: 6.[6] 0731	Start Time: 6.[6] 0830	Start Time: 6.[6] 0932	Start Time: 6.[6] 1030	Start Time: 6.[6] 1131	Start Time: 6.[6] 0029	Start Time: 6.[6] 0131	Start Time: 6.[6] 0229	Start Time: 6.[6] 0332	Start Time: 6.[6] 0431	Start Time: 6.[6] 0532	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 NA	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 NA	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[9])	59.84 °F	59.27 °F	58.58 °F	58.1 °F	57.46 °F	56.59 °F	56.56 °F	56.63 °F	56.65 °F	56.67 °F	56.68 °F	56.81 °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 T1	59.25	58.74	58.11	57.71	57.12	56.36	56.38	56.42	56.45	56.42	56.45	56.58		
68685 T2	58.88	58.42	57.78	57.36	56.84	56.02	56.56	56.12	56.12	56.18	56.12	56.25		
50522 T4	59.35	58.93	58.46	58.14	57.91	57.06	57.1	57.06	57	57.01	57.01	57.1		
50522 T5	59.26	58.87	58.37	58.04	57.42	56.95	56.98	57.01	57.01	57.02	57.03	57.1		
						NA								

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Z# 163246
INITIAL RM DATE 100914

ATTACHMENT 6
Page 2 of 3

6.[6] Date: From 100914 to 101014 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])
						NA									
Ambient Temperature (6.[14])	59.84 °F	59.27 °F	58.58 °F	57.4 °F	57.46	56.59 °F	56.56 °F	56.63 °F	56.65 °F	56.67 °F	56.69 °F	56.81 °F	°F	°F
End Time (6.[15])	0630	0732	0831	0933	1031	1132	0030	0132	0230	0333	0432	0533	NA	
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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Z# 163216
INITIAL [illegible] DATE 100914

ATTACHMENT 6
Page 3 of 3

6.[6] Date: From 100914 to 101014 Location: 375

6.[2] Comments: No entry into perma-con per standing order AREA G-50-1280 R.O., hourly temps are taken using data logger computer.

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Richard Montoya	[signature]	163216	[initials]	101014
Sammy Barela	Sammy Barela	114414	[initials]	10-10-14
	NA			

Operator (print)	Signature	Z#	Initials	Date
	NA			

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date