From: Haagenstad, Mark P
Sent: Friday, November 07, 2014 3:17 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; Diaz, Tammy; Juarez, Catherine L; Haagenstad, Mark P
Subject: Daily Technical Submission - November 7, 2014

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

Please contact me if additional information would be helpful.

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

NMED / LANL Technical Summary

November 7, 2014

LANL Technical Update:

- **Location of Nitrate Salt-Bearing Wastes**
  - Remediated nitrate salt-bearing waste containers.
    - All containers remain in the 375 Permacon.
  - Unremediated nitrate salt-bearing waste containers.
    - All containers remain in the 231 Permacon.

- **Monitoring - Daily Temperature**
  - Temperatures remain below 90°F.
    - Previous day's daily temperature data attached.

- **Monitoring – Visual Inspections**
  - No abnormal conditions were observed.

- **Monitoring – headspace gas (HSG)**
  - Containers (SWBs) 68685 and SB50522.
    - Continue daily head space gas (HSG) sample collection.
      - November 7, 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 November, LANL has conducted HSG sampling on 31 SWBs.

Additional measures currently underway

- As a conservative measure, LANL is currently conducting additional monitoring. This additional monitoring includes:
  - Containers (SWB) 68685 and SB50522.
    - LANL continuing *solid phase micro-extraction*.
    - Hourly temperature measurements are currently being performed on SWB 68685 and SB50522.
  - Five (5) other SWB overpacks (containing 55-gallon drums of remediated nitrate salt-bearing waste).
    - Continue twice-weekly HSG sample collection.
    -

Anticipated Changes to Nitrate Salt-Bearing Waste Containers (e.g. movement, re-packaging).

- Currently, no further movements or re-packaging are planned.

- **Other:**
    - As a reminder, there will be no technical summary provided on Tuesday, November 11, 2014 as it is a holiday. Summaries will resume on Wednesday, November 13, 2014. All Isolation Plan requirements will continue during the holiday break.

Next Call: Thursday, November 13, 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	---	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	In Progress Meeting scheduled for Monday September 29th	Complete September 29, 2014 (meeting held)
35.	Schedule a third update on LANL efforts – including teams.	LANL / NMED	---	Complete October 20, 2014

	Requested Information	Actionee	Status	Completion Date
36.	NMED request regarding LANL Causal Analysis associated with processing of nitrate salt-bearing waste at WCRRF – when document is Final.	LANL	Document is currently Draft.	
37.	NMED requested a diagram illustrating the current locations within the 375 Permacon of the 55 SWBs that contain the 57 remediated nitrate salt-bearing waste containers. NMED also requested a list of these 55 SWBs and the waste drums within each SWB (including the container numbers and waste stream type).	LANL	---	Complete October 27, 2014 (Diagram submitted) November 3, 2014 (Table submitted)
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.
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	In progress: Site visit scheduled for November 17, 2014; Follow-up meeting scheduled for November 20, 2014	

Remediated Nitrate Salt Container Headspace Gas Analysis

	68685				69553				69615			
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**
11/06/14	134	659	17053	5027	183	635	21958	3195	105	349	7821	460
11/07/14	134	674	17064	5074								

Remediated Nitrate Salt Container Headspace Gas Analysis

	69616				SB50069				SB50452			
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**
11/06/14	325	966	28725	6286	495	1074	25294	3862	662	932	22070	4255
11/07/14												

Remediated Nitrate Salt Container Headspace Gas Analysis

	SB50522				68624				69015			
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**
11/06/14	4165	546	52666	1037								
11/07/14	3212	414	45138	889	45	108	1628	238	64	0	1429	113

Remediated Nitrate Salt Container Headspace Gas Analysis

	69633				69635				69637			
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**
11/06/14												
11/07/14	373	370	5455	970	171	185	4255	201	54	210	2415	469

Remediated Nitrate Salt Container Headspace Gas Analysis

	69638				69639				69644			
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**
11/06/14												
11/07/14	499	493	7999	612	155	182	7839	275	130	321	6148	1511

ATTACHMENT 2
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TA-54 AREA G TA-54-231 NITRATE SALT TRU WASTE CONTAINER DAILY TEMPERATURE DATA SHEET

6.[6] Date: From 9/30/14 11/3/14 to 11/9/14

	Monday 6.[6] Start Time: 0920	Tuesday 6.[6] Start Time: 0850	Wednesday 6.[6] Start Time: 0942	Thursday 6.[6] Start Time: 0939	Friday 6.[6] Start Time:	Saturday 6.[6] Start Time:	Sunday 6.[6] Start Time:
TA-54-231							
Calibrated Infrared Thermometer (4.2.1[1][B])	Brand: Fluke Model: 561 Cal. Due Date: 7/29/15 File Number 161974	Brand: Fluke Model: 561 Cal. Due Date: 7/29/15 File Number 161974	Brand: Fluke Model: 561 Cal. Due Date: 7/29/15 File Number 161974	Brand: Fluke Model: 561 Cal. Due Date: 7/29/15 File Number 161974	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])	47.8 °F	42.9 °F	47.2 °F	47.2 °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])
S818435	49.9	44.4	48.2	47.6			
S802833	48.3	44.0	47.0	47.0			
S801676	47.8	43.6	46.4	46.6			
S816810	46.3	41.8	45.6	45.7			
70069	46.1	41.4	44.9	45.2			
S822844	46.5	42.0	45.7	45.8			
S825879	46.6	42.0	46.0	46.2			
S793724	46.7	42.1	46.0	46.1			
S813545	46.5	42.0	45.6	45.2			
S822713	48.3	44.0	47.6	47.7			
S802739	48.2	43.9	47.9	47.8			
69907	48.5	43.8	47.4	47.3			
S804995	48.9	44.5	47.6	48.1			
S816434	50.1	45.9	49.5	49.7			

ATTACHMENT 2
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6.[6] Date: From 11/3/14 to 11/9/14

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	49.5	45.3	49.5	49.2			
S862888	49.3	44.8	48.0	48.0			
70072	48.2	44.3	47.9	47.7			
S823184	48.6	44.6	48.3	48.3			
S822599	48.1	44.1	47.7	47.8			
69904	46.9	42.6	46.5	46.3			
S805051	46.5	42.5	46.6	46.0			
S864213	46.6	42.4	46.3	45.9			
S853714	46.7	42.7	46.8	46.7			
S803078	46.9	42.6	47.7	47.2			
S825878	46.8	43.0	47.4	47.0			
S823124	47.3	43.5	47.7	47.3			
S804948	48.8	44.9	48.6	48.4			
S813385	49.3	45.6	49.2	48.9			
S842446	50.7	47.1	50.3	50.0			
Ambient Temperature (6.[12])	47.9 °F	44.2 °F	48.1 °F	48.2 °F	°F	°F	°F
End Time (6.[13])	0934	0859	0949	0945			
6.[13]	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

ATTACHMENT 2
Page 3 of 3

6.[6] Date: From 11/3/14 to 11/9/14

6.[2] Comments: _____

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Thomas Vigil		236382		11/3/14
Gary Mann		226235		11-3-14
Josephine Duran		155971		11/4/14
Thomas Vigil		236382		11/4/14
Josephine Duran		155971		11/5/14
Thomas Vigil		236382		11/5/14
Thomas Vigil		236382		11/6/14
Josephine Duran		155971		11/6/14

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date

ATTACHMENT 3
Page 1 of 3

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

6.[6] Date: From 11/3/14 to 11/9/14

	Monday 6.[6] Start Time: 1356	Tuesday 6.[6] Start Time: 0954	Wednesday 6.[6] Start Time: 1140	Thursday 6.[6] Start Time: 1420	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: 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.[7])	58.8 °F	55.6 °F	57.4 °F	61.5 °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])
68685	59.2	56.3	58.1	61.8			
68540	59.3	56.4	58.2	62.4			
LA00000070503 68553	59.4	56.2	58.0	62.5			
LA00000070503 69445	59.9	56.7	58.3	62.4			
69618	60.1	56.2	58.5	62.5			
69013	59.9	56.7	58.5	62.2			
LASB50522	59.5	57.1	58.7	62.1			
LASB50452	59.4	57.3	58.6	62.0			
LASB50431	59.8	57.1	58.5	61.8			
LASB50069	59.2	56.7	58.3	61.8			
LASB50073	59.2	57.6	58.4	62.0			
69636	59.9	57.4	58.7	62.2			
69616	59.5	57.2	58.5	63.6			
69417	60.2	57.3	58.5	63.6			

ATTACHMENT 3
Page 2 of 3

6.[6] Date: From 11/3/14 to 11/9/14

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	60.6	57.0	58.7	62.5			
69520	60.0	57.2	58.7	62.2			
69641	60.5	57.6	58.8	63.0			
69298	60.2	57.6	58.6	62.2			
LASB02203	59.9	57.5	58.4	62.0			
Ambient Temperature (6.[12])	59.0 °F	55.6 °F	57.8 °F	61.7 °F	____ °F	____ °F	____ °F
End Time (6.[13])	1402	1000	1144	1424			
6.[13]	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 11/3/14 to 11/9/14

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Thomas Vigil	Thomas Vigil	123682	TV	11/3/14
Pancho Mieras	Pancho Mieras	135705	PM	11-3-14
Thomas Vigil	Thomas Vigil	123682	TV	11/4/14
Joshua Lopez	Joshua Lopez	116598	JL	110414
Thomas Vigil	Thomas Vigil	123682	TV	11/5/14
Joshua Lopez	Joshua Lopez	116598	JL	110514
Thomas Vigil	Thomas Vigil	123682	TV	11/6/14

Operator (print)	Signature	Z#	Initials	Date
Joshua Lopez	Joshua Lopez	116598	JL	110614

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 11/3/14 to 11/9/14

	Monday 6.[6] Start Time: 1403	Tuesday 6.[6] Start Time: 1001	Wednesday 6.[6] Start Time: 1150	Thursday 6.[6] Start Time: 1425	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: 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.[7])	59.2 °F	55.0 °F	57.3 °F	57.2 °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])
LASB02198	60.3	53.4	56.7	57.2			
68638	60.1	54.1	57.1	57.2			
69615	59.8	54.5	57.9	57.0			
69635	61.5	55.0	58.2	58.7			
69642	60.1	56.5	58.4	60.7			
69630	60.2	54.6	58.0	58.7			
69633	59.7	52.8	57.1	57.3			
68430	59.3	53.0	56.6	56.2			
68631	59.1	53.1	56.4	56.3			
69634	59.0	52.5	56.2	56.1			
68567	58.8	53.3	56.2	55.5			
94227	59.0	52.4	56.2	56.3			
LASB50442	59.2	53.0	56.6	56.1			
69644	59.5	52.9	56.0	56.0			
LASB50443	59.3	54.1	56.8	58.0			
69638	59.6	53.6	57.1	57.4			

ATTACHMENT 4
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6.[6] Date: From 11/3/14 to 11/9/14

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 2 (continued)							
68624	59.8	53.8	57.7	57.0			
68507	59.3	52.3	56.1	55.6			
69568	60.1	52.6	58.8	55.1			
69553	58.8	53.4	56.0	56.0			
69598	58.8	53.4	55.9	56.7			
LASB50559	58.7	52.7	55.7	55.7			
69015	59.7	52.9	56.4	55.7			
69639	59.7	53.8	56.9	56.7			
69637	59.9	54.1	57.4	57.8			
Ambient Temperature (6.[12])	59.1 °F	55.2 °F	56.8 °F	57.1 °F	____ °F	____ °F	____ °F
End Time (6.[13])	1409	1007	1157	1431			
6.[13]	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

6.[2] Comments:

ATTACHMENT 4
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6.[6] Date: From 11/3/14 to 11/9/14

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Thomas Vigil		123682		11/3/14
Pancho Miera		135765		11-3-14
Thomas Vigil		123682		11/4/14
Joshua Lopez		116598		11/4/14
Thomas Vigil		123682		11/5/14
Joshua Lopez		116598		11/05/14
Thomas Vigil		123682		11/6/14

Operator (print)	Signature	Z#	Initials	Date
Joshua Lopez		116598		11/06/14

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 11/3/14 to 11/9/14

	Monday 6.[6] Start Time: 1350	Tuesday 6.[6] Start Time: 0949	Wednesday 6.[6] Start Time: 1144	Thursday 6.[6] Start Time: 1413	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: 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 101910	Brand: Fluke Model: 561 Cal. Due Date: 6/12/15 File Number 101910	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])	57.5 °F	48.1 °F	53.7 °F	52.6 °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])
69519	57.8	47.4	53.1	51.9			
69645	58.5	47.5	53.5	50.9			
94068	58.1	47.4	53.7	51.0			
93605	58.3	47.4	53.7	51.8			
69548	57.9	47.3	53.6	51.3			
69604	58.2	47.3	53.6	51.4			
LASB50529	57.9	47.6	53.5	51.4			
LASB50418	57.9	47.3	53.5	51.4			
69036	57.9	46.4	53.1	52.0			
LASB50451	57.9	46.9	53.2	52.8			
69559	58.3	47.7	53.3	52.9			
LASB50448	58.5	47.7	53.1	52.1			
Ambient Temperature (6.[12])	57.9 °F	47.2 °F	53.7 °F	52.6 °F	°F	°F	°F
End Time (6.[13])	1355	0953	1150	1419			
6.[13]	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

ATTACHMENT 5
Page 2 of 2

6.[6] Date: From 11/3/14 to 11/9/14

6.[2] Comments:

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Thomas Vigil		236382	tv	11/2/14
Pancho Miera		235765	TP	11-3-14
Thomas Vigil		236382	tv	11/4/14
Joshua Lopez		166598	JL	11/04/14
Thomas Vigil		236382	tv	11/5/14
Joshua Lopez		166598	JL	11/05/14
Thomas Vigil		236382	tv	11/6/14
Joshua Lopez		166598	JL	11/06/14

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 11-6-14 to 11-6-14 Location: 375

	Start Time: 6.[6] 0628	Start Time: 6.[6] 0725	Start Time: 6.[6] 0823	Start Time: 6.[6] 0924	Start Time: 6.[6] 1025	Start Time: 6.[6] 1127	Start Time: 6.[6] 1226	Start Time: 6.[6] 1324	Start Time: 6.[6] 1426	Start Time: 6.[6] 1525	Start Time: 6.[6] 1626	Start Time: 6.[6] 1723	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer (4.2.1[1][B])	Brand: Model: Cal. Due Date: File Number: N/A	Brand: Model: Cal. Due Date: File Number: N/A	Brand: Model: Cal. Due Date: File Number: N/A	Brand: Model: Cal. Due Date: File Number: N/A	Brand: Model: Cal. Due Date: File Number: N/A	Brand: Model: Cal. Due Date: File Number: N/A	Brand: Model: Cal. Due Date: File Number: N/A	Brand: Model: Cal. Due Date: File Number: N/A	Brand: Model: Cal. Due Date: File Number: N/A	Brand: Model: Cal. Due Date: File Number: N/A	Brand: Model: Cal. Due Date: File Number: N/A	Brand: Model: Cal. Due Date: File Number: N/A	Brand: Model: Cal. Due Date: File Number:	Brand: Model: Cal. Due Date: File Number:
Ambient Temperature (6.[7])	56.26 °F	51.46 °F	52.56 °F	53.7 °F	55.84 °F	57.79 °F	59.7 °F	61.33 °F	61.97 °F	61.78 °F	60.42 °F	58.54 °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])
68685T1	52.62	52.92	53.8	53.34	55.63	57.41	59.28	60.56	61.34	61.11	59.95	58.22		
68685T2	52.09	52.31	53.22	52.87	55.08	56.8	58.51	59.7	60.33	60.24	59.21	57.44		
50522T4	52.91	53.18	53.93	53.72	55.37	56.75	58.29	59.37	60.01	60.06	59.22	57.92		
50522T5	52.88	53.08	53.8	53.72	55.46	56.89	58.35	59.39	59.98	59.97	59.16	57.77		

ATTACHMENT 6
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6.[6] Date: From 11-6-14 to 11-6-14 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])
Ambient Temperature (6.[12])	51.26°F	51.46°F	52.56°F	53.17°F	55.84°F	57.87°F	59.7°F	61.33°F	61.94°F	61.26°F	60.43°F	58.54°F	____°F	____°F
End Time (6.[13])	0629	0726	0824	0925	1026	1128	1227	1325	1427	1526	1627	1724		
6.[13] Operator:	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	DA	Operator:	Operator:
Operator:	MW	MW	JC	[illegible]	JW	JW	[illegible]	JC	JC	JC	JC	JC	Operator:	Operator:

ATTACHMENT 6
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6.[6] Date: From 11-6-14 to 11-6-14 Location: 375

6.[2] Comments: Did not Enter Permacon Per Standing Order Area-G 1247 R.5. All Temps taken from Data logger in control room in Dome 375

N/A

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
William Juarez	[signature]	201458	[initials]	11-6-14
Jesse Chavez	[signature]	121457	JC	11-6-14
Joshua Lopez	[signature]	116578	[initials]	11/06/14
Lina Aguirre	[signature]	114977	LA	11-06-14
N/A				

Operator (print)	Signature	Z#	Initials	Date
N/A				

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
Robert Uhlarder	[signature]	122493	[initials]	11-6-14

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

6.[6] Date: From 11-6-14 to 11-7-14 Location: Dome 375

	Start Time: 6.[6] 1830	Start Time: 6.[6] 1927	Start Time: 6.[6] 2026	Start Time: 6.[6] 2129	Start Time: 6.[6] 2228	Start Time: 6.[6] 2327	Start Time: 6.[6] 2427	Start Time: 6.[6] 0127	Start Time: 6.[6] 0225	Start Time: 6.[6] 0325	Start Time: 6.[6] 0424	Start Time: 6.[6] 0526	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer (4.2.1[1][B])	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.[7])	55.61 °F	54.55 °F	53.54 °F	52.58 °F	52.01 °F	52.93 °F	51.56 °F	52.9 °F	51.07 °F	52.04 °F	52.22 °F	51.14 °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])
TI 68685	55.38	54.34	53.45	52.50	52.02	52.89	52.17	53.36	51.8	52.87	52.8	51.88		
TE 68688	54.71	53.78	52.23	52.08	51.57	53.03	51.52	53.16	51.07	52.36	52.5	51.45		
T-4 50522	55.67	54.88	54.19	52.56	53.01	53.59	53.08	53.79	52.72	53.37	53.26	52.57		
T-5 50522	55.56	54.77	54.1	53.4	52.98	53.65	52.96	53.82	52.63	53.32	53.26	52.54		
						N/A							N/A	

WORKING COPY
Z# 226235
INITIAL [illegible] DATE 11-6-14

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6.[6] Date: From 11-6-14 to 11-7-14 Location: Dome 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.[12])	55.59 °F	54.51 °F	53.54 °F	52.54 °F	52.01 °F	53.17 °F	51.52 °F	51.25 °F	51.07 °F	52.01 °F	52.22 °F	51.23 °F		°F	°F
End Time (6.[13])	1831	1928	2026	2130	2229	2330	2428	0128	0226	0326	0425	0527		N/A	
6.[13]	Operator: LQR Operator: DB	Operator: LQR Operator: DB	Operator: LQR Operator: DB	Operator: LQR Operator: DB	Operator: DB Operator: LQC	Operator: DB Operator: LQC	Operator: DB Operator: LQC	Operator: DB Operator: LQC	Operator: DB Operator: LQC	Operator: LQC Operator: DB	Operator: LQC Operator: DB	Operator: LQC Operator: DB	Operator: Operator:	Operator: Operator:	Operator: Operator:

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6.[6] Date: From 11-6-14 to 11-7-14 Location: Dome 375

6.[2] Comments: Did not enter Permacon for Standing Order Area G 1247 R.5 All Temps taken from Data Logger in dome 375

NA

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
William J. [illegible]	[signature]	V12807	[illegible]	11-6-14
Sammy Borek	[signature]	114474	SB	11-6-14

NA

Operator (print)	Signature	Z#	Initials	Date

NA

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date