From: Juarez, Catherine L
Sent: Thursday, February 12, 2015 9:43 PM
To: Ryan.Flynn@state.nm.us; Jeff.Kendall@state.nm.us; John Kieling; steve.pullen@state.nm.us; Timothy.Hall@state.nm.us; siona.briley@state.nm.us; ricardo.maestas@state.nm.us; Gregory.Lauer@state.nm.us; steve.holmes@state.nm.us; coleman.smith@state.nm.us; butch.tongate@state.nm.us; Cobrain, Dave, NMENV; kathryn.roberts@state.nm.us
Cc: Pete Maggiore; Silas DeRoma; Cummings, Lisa K; Nickless, David J; Bishop, M. Lee; Turner, Gene E; Armijo, Karen (CONTR); Wallace, Terry C; Torres, Enrique; Woitte, Deborah Kay; Clemmons, Steve; Allen, Don; Brandt, Michael Thomas; Sharp-Geiger, Raeanna Racine; Dorries, Alison Marie; Grieggs, Tony; Bacigalupa, Gian A; 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; Cabbil, Cheryl Denise; Young, Steven L; Erickson, Randy; Funk, David John; Alexander, Rick A; Frederici, Dave; Diaz, Tammy; Juarez, Catherine L; Robinson, Bruce Alan; Lansing, Michael Alan; Tymkowych, John M; Haagenstad, Mark P
Subject: Daily Technical Submission - February 12, 2015

Sent on behalf of Mark Haagenstad.

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 Mark at mph@lanl.gov or 665-2014 if additional information would be helpful.

Catherine Juarez, CHMM, REM
Los Alamos National Laboratory
Environmental Compliance Group
cjuarez@lanl.gov
505-667-4961

NMED / LANL Technical Summary

February 12, 2015

Participants:

- New Mexico Environment Department: Tim Hall.
- LANL – Los Alamos Field Office:
- LANL – Los Alamos National Security: Alison Dorries, Bruce Robinson and Mark Haagenstad.

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 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.
            - February 12, 2015 HSG data attached.
                - H_2, CO, CO_2 and N_2O
    - Other containers:
        - A minimum of once per month HSG sampling will be conducted.
            - To date in February, LANL has conducted HSG sampling on 47 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.
- February 12, 2015 HSG data attached.

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

Other

- Due to the Federal Holiday, there will be no daily technical submission to NMED on Monday, February 16, 2015. All inspection and monitoring required under the LANL Isolation Plan, Revision 2 will continue and will be reported in the February 17, 2015 written daily submission.

Next Call: Tuesday, February 17, 2015

Summary Chart - Requested Information / Pending Issues:

	Requested Information	Actionee	Status	Completion Date
1.	NMED contact / process for LANL to notify NMED under the Revised Isolation Plan (e.g., 24 hour notices).	NMED	---	Complete June 5, 2014
2.	Keep NMED informed on the status of on-going chemistry / analytical work.	LANL	---	Complete June 9, 2014
3.	On upcoming daily call, provide additional discussion on the potential for liquids in the 350 post-1991 cemented containers (including a discussion of the review of RTR tapes).	LANL	---	Complete July 6, 2014 (Discussion on call) July 18, 2014 (Meeting held)
4.	On upcoming call, provide additional discussion on why 231 and 375 Permacon fire suppression systems are not part of the LANL RCRA Hazardous Waste Facility Permit Contingency Plan.	LANL	---	Complete June 5, 2014
5.	Send copy of June 4, 2014 written daily submission to Trais Kliphuis. Also, include her on future daily submissions.	LANL	---	Complete June 5, 2014
6.	Provide LANL procedures and example records associated with post-1991 TA-55 cementation process discussed on June 6.	LANL	---	Complete July 3, 2014
7.	Provide information on numbers of containers in the post-1991 cemented waste streams from the TA-55 process discussed on June 6. This should include numbers regarding RTR status (RTR'd, meet WIPP criteria, requiring remediation).	LANL	---	Complete June 17, 2014 (Supplemental Info provided July 3)
8.	Provide RTR video and pre-screening information associated with those containers requiring remediation from the post-1991 cemented waste streams from the TA-55 process discussed on June 6.	LANL	---	Complete July 3, 2014
9.	Provide copy of CCP/LANL Interface Document.	LANL	---	Complete June 9, 2014
10.	Provide a list of the analytes for which LANL is sampling HSG (CO_2 and LFL analytes).	LANL	---	Complete June 11, 2014
11.	Discuss potential sampling of HSG for NO_x.	LANL	---	Complete June 16, 2014

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

	Requested Information	Actionee	Status	Completion Date
13.	Respond to NMED email request for information associated with the nitrate salt-bearing parent and daughter waste containers. WIPP Recovery Daily Meeting Action List item #84 – NMED requested a copy of the LANL remediation records for waste stored in Panel 6 (Trais Kliphuis) – is a subset of the information in item 5 of this action.	LANL	---	Complete July 9, 2014 (Letter sent addressing items 1-4 and 6-9 of the email request) July 17, 2014 (Letter sent with updated spreadsheet) August 7, 2014 (First submittal in response to item 5) August 14, 2014 (Letter addressing items 2 & 8 - Second submittal in response to item 5) August 18, 2014 (Third submittal in response to item 5) August 21, 2014 (Fourth submittal in response to item 5) August 27, 2014 (Fifth submittal in response to item 5) September 4, 2014 (Sixth submittal in response to item 5) September 9, 2014 (Seventh submittal in response to item 5) September 11, 2014 (Eighth submittal in response to item 5) September 22, 2014 (Ninth submittal in response to item 5) September 23, 2014 (Tenth submittal in response to item 5) October 1, 2014 (Eleventh submittal in response to item 5) October 8, 2014 (Twelfth submittal in response to item 5) October 16, 2014 (Thirteenth submittal in response to item 5) October 23, 2014 (Fourteenth submittal in response to item 5) October 27, 2014 (Fifteenth submittal in response to item 5) October 28, 2014 (Sixteenth submittal in response to item 5) November 3, 2014 (Seventeenth submittal in response to item 5)

	Requested Information	Actionee	Status	Completion Date
14.	NMED will review the Round Sheets (provided in June 11 summary) and inform LANL if these should be attachments to the Revised Plan, or if they fall under the provision in Section I of the Revised Isolation Plan and their identification during this technical call is sufficient.	NMED	NMED has reviewed Round Sheets – no comments / direction at this time. NMED will address any comments in their formal response to Revised Container Isolation Plan.	Complete June 23, 2014
15.	NMED has requested 'copies of any waste processing, treatment, characterization stop orders issued since Feb 14, 2014.'	LANL	---	Complete June 13, 2014 (Included w/ daily summary) June 16, 2014 (Discussed current TA-54 & WCRRF operations)
16.	NMED requested information on the location of drums 68327 and 68328. Request made June 14.	LANL	---	Complete June 14, 2014
17.	Update on LANL efforts – including LANL teams. (On June 20 call, LANL offered to schedule an update meeting).	LANL / NMED	---	Complete July 2, 2014
18.	Neutralizer use in association with container S855793 (parent of 68660 and 68685).	LANL	---	Complete June 25, 2014
19.	List of nitrate salt-bearing waste containers that LANL records indicate contain absorbed liquids with the same neutralizer, as discussed during June 25 technical call.	LANL	---	Complete September 30, 2014 (with August 26, 2014 response)
20.	Schedule follow-on update on LANL efforts – including teams.	LANL / NMED	---	Complete August 14, 2014 (Meeting held)
21.	NMED requested information on document approval / review (as discussed on July 3 call).	LANL	---	Complete July 29, 2014
22.	What analyses will be conducted on samples taken from empty drums that previously contained nitrate salt-bearing waste.	LANL	---	Complete July 7, 2014
23.	NMED requested the following information on cemented waste containers generated from TA-55, that are currently stored above-ground at Area G: container id number; location; form (cans or monoliths); and type of concrete. Additionally, NMED requested information on pH adjustment during waste generation process, and information on anticipated pH of free liquids (and rationale).	LANL	---	Complete July 17, 2014 (Letter sent w/ information) July 18, 2014 (Meeting held)

	Requested Information	Actionee	Status	Completion Date
24.	NMED requested the procedure for sampling empty parent drums that previously contained nitrate salt-bearing waste.	LANL	EP-AREAG-WO-DOP-1245 is included in Enclosure 1 to LANL's July 3, 2014 *Response to Request for Information on Management of Waste at LANL*.	Complete July 8, 2014
25.	NMED requested an additional discussion on a future technical call regarding CO_2, including data.	LANL	---	Complete August 14, 2014 (Meeting held)
26.	NMED requested additional discussion on CIN-01 waste containers and absorbent, including confirmation and extent of use.	LANL	---	Complete July 18, 2014 (Meeting held)
27.	NMED requested historic analytical information on pH of liquids associated with gypsum cemented waste.	LANL	---	Complete August 7, 2014
28.	NMED requested link to pdf of Actinide Quarterly edition (3rd Q 2008).	LANL	---	Complete July 21, 2014
29.	NMED requested a copy of lessons learned	LANL	---	Complete August 11, 2014
30.	NMED request regarding empty drum sampling presentation.	LANL	Presentation is a pre-decisional draft/working document not for external release	August 25, 2014
31.	Respond to NMED email request dated 8/12/2014 for information associated with the nitrate salt-bearing waste containers.	LANL	---	Complete September 11, 2014
32.	NMED request regarding technical presentation.	LANL	Presentation is a pre-decisional draft/working document not for external release	August 25, 2014
33.	NMED request regarding literature review of catalytic reactions.	LANL	Literature review is a pre-decisional draft/working document not for external release	August 25, 2014
34.	LANL requested to schedule a meeting with NMED on remediation planning and schedules.	LANL / NMED	---	Complete September 29, 2014 (meeting held)
35.	Schedule a third update on LANL efforts – including teams.	LANL / NMED	---	Complete October 20, 2014

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

	Requested Information	Actionee	Status	Completion Date
38.	NMED requested documentation regarding CIN01.001 waste containers that are not part of the September 19, 2014 Nitrate Salts-Bearing Waste Container Isolation Plan, Revision 2.	LANL	In Progress LANL will submit this documentation in batches as it is becomes available.	Submitted 100 out of 586 RTRs and documentation on October 3, 2014. Submitted documentation for 101-200 containers on October 10, 2014. Submitted documentation for 201-300 containers on October 16, 2014. Submitted documentation for 301-400 containers on October 23, 2014. Submitted documentation for 401-500 containers on October 27, 2014. Submitted documentation for 501-586 containers on November 12, 2014. Submitted RTR Videos 101-150 on November 12, 2014. Submitted RTR Videos 151-200 on November 20, 2014. Submitted RTR Videos 201-250 on December 1, 2014. Submitted RTR Videos 251-300 on December 19, 2014. Submitted RTR Videos 301-312 on January 15, 2015.
39.	NMED requested a diagram of the location of the thermocouples on 68685 and SB50522.	LANL	---	Complete October 27, 2014
40.	NMED requested a copy of the safety basis document for remediation planning when it is finalized.	LANL	Document is currently in Draft.	
41.	Trending and correlation of temperature and HSG monitoring data.	LANL	In progress	
42.	Schedule a fourth update on LANL efforts – including teams.	LANL/ NMED	---	Complete November 3, 2014

	Requested Information	Actionee	Status	Completion Date
43.	Schedule a fifth update on LANL efforts – including teams.	LANL/ NMED	---	Complete November 20, 2014
44.	Schedule a sixth update on LANL efforts – including teams.	LANL/ NMED	---	Complete December 9, 2014
45.	NMED requested documentation regarding CIN01 drums.	LANL	Email sent February 3, 2015. Letter to follow.	
46.	NMED requested documentation regarding duplicate drum number.	LANL	In Progress	
47.	NMED requested the ESS plan for temperature control and sampling once finalized.	LANL	Document is currently in Draft.	
48.	Schedule a seventh update on LANL efforts – including teams.	LANL/ NMED	---	Complete January 29, 2015.
49.	Fire suppression repair plan for Dome 231	LANL	---	This repair plan is no longer necessary because drum movement will not occur during the repair process.
50.	NMED requested information regarding solution packages 36, 37, 57 and 78.	LANL	In Progress	

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**
02/12/15	127	312	9677	2536	162	471	13630	1845	102	349	6968	333

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**
02/12/15	340	767	19518	3851	521	1025	20029	2426	710	712	15141	2862

Remediated Nitrate Salt Container Headspace Gas Analysis

	SB50522			
Date	**H_2 ppm**	**CO ppm**	**CO_2 ppm**	**N_2O ppm**
02/12/15	1764	443	37484	999

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 2-09-15 to 2-15-15

	Monday 6.[6] Start Time: 0909	Tuesday 6.[6] Start Time: 0913	Wednesday 6.[6] Start Time: 1411	Thursday 6.[6] Start Time:	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: 07/29/15 File Number 101974	Brand: Fluke Model: 561 Cal. Due Date: 07/29/15 File Number 101974	Brand: Fluke Model: 561 Cal. Due Date: 07/29/15 File Number 101974	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[7])	58.2 °F	60.4 °F	58.4 °F	°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	56.0	55.9	56.0				
S802833	55.0	55.3	56.0				
S801676	55.7	55.3	56.5				
S816810	61.4	55.7	56.9				
70069	60.4	60.2	56.6				
S822844	61.10	61.2	56.7				
S825879	60.8	2-10-15 ~~61.2~~ 60.4	56.9				
S793724	61.0	2-10-15 ~~60.4~~ 61.3	56.9				
S813545	59.0	2-10-15 ~~61.3~~ 59.2	56.5				
S822713	59.1	2-10-15 ~~59.2~~ 59.2	56.7				
S802739	57.5	2-10-15 ~~58~~ 57.8	56.2				
69907	57.1	56.8	56.1				
S804995	57.5	57.9	56.5				
S816434	57.8	58.2	56.8				

WORKING COPY
Z# 151971
DATE 02/09/15

ATTACHMENT 2
Page 2 of 3

6.[6] Date: From 2·9·15 to 2·15·15

Container ID #	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
TA-54-231 (continued)							
S805289	58.3	58.0	56.8				
S862888	57.3	57.0	56.6				
70072	57.6	57.1	56.2				
S823184	58.8	58.7	56.4				
S822599	59.4	59.4	57.0				
69904	59.2	59.2	57.0				
S805051	59.3	59.4	56.8				
S864213	59.8	59.3	57.0				
S853714	60.4	59.8	57.2				
S803078	60.5	60.1	56.9				
S825878	59.9	59.6	56.8				
S823124	60.0	59.2	57.0				
S804948	57.6	57.2	56.8				
S813385	56.9	57.3	56.8				
S842446	57.8	56.7	57.1				
Ambient Temperature (6.[12])	58.2 °F	57.5 °F	56.4 °F	_____ °F	_____ °F	_____ °F	_____ °F
End Time (6.[13])	0911	0920	1420	_____	_____	_____	_____
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 2.9.15 to 2.15.15

6.[2] Comments: _____

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Josephine Duran	Duran	157971	pd	02/09/15
Thomas Vigil	[signature]	236382	tv	2/9/15
Josephine Duran	Duran	157971	pd	2/10/15
Thomas Vigil	[signature]	236382	tv	2/10/15
Josephine Duran	Duran	157971	pd	2/11/15
Thomas Vigil	[signature]	236382	tv	2/11/15

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 2.9.15 to 2.15.15

IPC-1

	Monday 6.[6] Start Time: 1232	Tuesday 6.[6] Start Time: 1416	Wednesday 6.[6] Start Time: 1346	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 (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: ____ 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.[7])	61.2 °F	61.7 °F	54.2 °F	____ °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	59.1	61.9	55.0				
LA00000070503 68540	59.6	62.0	55.0				
LA00000070503 68553	59.3	62.2	54.8				
69445	59.2	61.7	55.4				
69618	59.8	61.5	55.4				
69013	59.0	61.7	55.5				
LASB50522	59.1	61.7	55.6				
LASB50452	59.2	61.8	55.7				
LASB50431	59.1	61.7	55.6				
LASB50069	58.8	61.5	55.3				
LASB50073	58.6	61.1	55.9				
69636	59.3	61.4	56.6				
69616	59.2	62.3	56.5				
69417	59.3	62.0	55.9				

ATTACHMENT 3
Page 2 of 3

6.[6] Date: From 2·9·15 to 2·15·15

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	59.1	61.7	56.0				
69520	59.4	61.5	56.2				
69641	59.3	61.7	56.3				
69298	59.6	61.7	56.5				
LASB02203	59.0	61.5	56.1				
Ambient Temperature (6.[12])	59.5 °F	61.1 °F	55.2 °F	____ °F	____ °F	____ °F	____ °F
End Time (6.[13])	1241	1421	1350				
6.[13]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

6.[2] Comments:

ATTACHMENT 3
Page 3 of 3

6.[6] Date: From 2·9·15 to 2·15·15

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Thomas Vigil		236382		2/9/15
Joshua Lopez		116598		02/09/15
Thomas Vigil		236382		2/10/15
Joshua Lopez		116598		02/10/15
Larry Brito		116405		2-11-15
Pancho Miera		235765		2-11-15

Operator (print)	Signature	Z#	Initials	Date

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 2-9-15 to 2-15-15

	Monday 6.[6] Start Time: 1142	Tuesday 6.[6] Start Time: 1422	Wednesday 6.[6] Start Time: 1352	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 (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: 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.[7])	59.7 °F	59.8 °F	58.7 °F	°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	58.8	60.7	58.2				
68638	59.7	61.9	58.1				
69615	60.3	62.1	58.6				
69635	60.8	62.6	59.1				
69642	60.7	62.3	58.3				
69630	60.4	62.1	58.2				
69633	60.4	63.1	58.8				
68430	60.1	62.3	58.0				
68631	59.8	62.0	57.8				
69634	59.2	61.6	57.8				
68567	59.6	59.3	58.6				
94227	57.8	60.3	58.4				
LASB50442	60.2	61.1	58.7				
69644	60.4	61.5	58.7				
LASB50443	59.1	61.9	58.4				
69638	59.8	61.1	59.1				

ATTACHMENT 4
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6.[6] Date: From 2-9-15 to 2-15-15

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	59.1	61.1	59.0				
68507	58.8	60.5	59.3				
69568	57.8	59.6	58.1				
69553	57.7	58.1	57.5				
69598	56.3	58.4	58.0				
LASB50559	58.0	59.8	58.3				
69015	59.2	60.7	59.1				
69639	59.7	60.9	59.8				
69637	60.1	61.2	59.3				
Ambient Temperature (6.[12])	57.5 °F	61.5 °F	58.0 °F	____ °F	____ °F	____ °F	____ °F
End Time (6.[13])	1250	1429	1356				
6.[13]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: TT	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

6.[2] Comments:

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6.[6] Date: From 2.9.15 to 2.15.15

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Thomas Vigil	T Vigil	236382	TV	2/9/15
Joshua Roper	Joshua Roper	116578	JR	020915
Thomas Vigil	T Vigil	236382	TV	2/10/15
Joshua Roper	Joshua Roper	116578	JR	021015
Larry Brito	L Brito	116405	LB	2-11-15
Pancho Miera	P Miera	1235765	PM	2-11-15

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date

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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 2-9-15 to 2-15-15

	Monday 6.[6] Start Time: 1227	Tuesday 6.[6] Start Time: 1411	Wednesday 6.[6] Start Time: 1340	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 (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 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.[7])	60.4 °F	61.8 °F	58.2 °F	°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	59.3	62.2	57.5				
69645	59.5	62.4	57.7				
94068	59.6	62.5	58.3				
93605	59.7	62.7	57.7				
69548	59.7	62.5	57.3				
69604	59.9	62.4	57.8				
LASB50529	59.8	62.3	57.9				
LASB50418	59.5	62.1	57.8				
69036	59.9	62.5	57.8				
LASB50451	59.8	62.6	57.4				
69559	60.4	62.0	57.3				
LASB50448	60.0	61.5	57.2				
Ambient Temperature (6.[12])	59.4 °F	62.4 °F	57.4 °F	°F	°F	°F	°F
End Time (6.[13])	1231	1415	1344				
6.[13]	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

ATTACHMENT 5
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6.[6] Date: From 2.9.15 to 2.15.15

6.[2] Comments:

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Thomas Vigil		Z36382		2/9/15
Joshua Lopez		1165858		02015
Thomas Vigil		Z36382		2/10/15
Joshua Lopez		1165858		02015
Larry Bato		1164052		2-11-15
Pancho Mierca		1235765		2-11-15

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 2-11-15 to 2-11-15 Location: 375

	Start Time: 6.[6] 0628	Start Time: 6.[6] 0723	Start Time: 6.[6] 0826	Start Time: 6.[6] 0927	Start Time: 6.[6] 1023	Start Time: 6.[6] 1124	Start Time: 6.[6] 1225	Start Time: 6.[6] 1323	Start Time: 6.[6] 1421	Start Time: 6.[6] 1523	Start Time: 6.[6] 1621	Start Time: 6.[6] 1721	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer (4.2.1[1][B])	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: N/A File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[7]) T3	52.15 °F	52.21 °F	51.33 °F	51.07 °F	52.34 °F	52.55 °F	53.13 °F	54.2 °F	55.06 °F	55.15 °F	53.63 °F	52.46 °F	°F	°F
Container ID # (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
68685 T1	53.00	53.04	52.13	52.03	53.27	53.26	53.39	54.02	54.83	54.83	53.59	52.54		
68685 T2	52.31	52.42	51.59	51.24	52.52	52.73	52.73	53.39	54.22	54.13	52.93	51.92		
50522 T4	53.00	52.87	52.28	52.31	53.20	52.94	53.34	53.76	54.46	54.51	53.65	52.84		
50522 T5	52.82	52.70	52.08	52.08	52.92	52.79	53.25	53.81	54.53	54.54	53.51	52.69		
							N/A							

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6.[6] Date: From 2-11-15 to 2-11-15 Location: 375

Container ID # (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
						N/A								N/A	
Ambient Temperature (6.[12]) T3	52.12 °F	52.24 °F	51.41 °F	51.07 °F	52.34 °F	52.64 °F	53.14 °F	54.23 °F	55.06 °F	55.15 °F	53.63 ~~53.67~~ °F DA 2-16-15	52.46 °F	°F	°F
End Time (6.[13])	0629	0724	0827	0928	1024	1125	1226	1324	1422	1524	1622	1722		
6.[13]	Operator: WT / Operator: SC	Operator: DA / Operator: WT	Operator: WT / Operator: SC	Operator: WT / Operator: SC	Operator: DA / Operator: WT	Operator: DA / Operator: SC	Operator: DA / Operator: WT	Operator: DA / Operator: WT	Operator: DA / Operator: WT	Operator: DA / Operator: WT	Operator: DA / Operator: WT	Operator: DA / Operator: WT	Operator: / Operator:	Operator: / Operator:

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6.[6] Date: From 2-11-15 to 2-11-15 Location: 375

6.[2] Comments: Did not enter Permacon due to Standing Order 1247 R. 2 all Temps were taken Data Logger Computer in Dome 375

N/A

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
William Juarez		201458	WJ	2-11-15
Jesse Chavez		21458	JC	2-11-15
Tina Aguirre-Rivas	Tina Aguirre-Rivas	1149794		2-11-15

N/A

Operator (print)	Signature	Z#	Initials	Date

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
Gary Mann				2-11-15

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

6.[6] Date: From 2-11-15 to 2-12-15 Location: 375

	Start Time: 6.[6] 1825	Start Time: 6.[6] 1926	Start Time: 6.[6] 2030	Start Time: 6.[6] 2625	Start Time: 6.[6] 2227	Start Time: 6.[6] 2327	Start Time: 6.[6] 0028	Start Time: 6.[6] 0127	Start Time: 6.[6] 0225	Start Time: 6.[6] 0326	Start Time: 6.[6] 0428	Start Time: 6.[6] 0529	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer (4.2.1[1][B])	Brand / Model NA / Cal Due Date / File Number	Brand / Model NA / Cal Due Date / File Number	Brand / Model NA / Cal Due Date / File Number	Brand / Model NA / Cal Due Date / File Number	Brand / Model NA / Cal Due Date / File Number	Brand / Model NA / Cal Due Date / File Number	Brand / Model NA / Cal Due Date / File Number	Brand / Model NA / Cal Due Date / File Number	Brand / Model NA / Cal Due Date / File Number	Brand / Model NA / Cal Due Date / File Number	Brand / Model NA / Cal Due Date / File Number	Brand / Model NA / Cal Due Date / File Number	Brand / Model / Cal Due Date / File Number	Brand / Model / Cal Due Date / File Number
Ambient Temperature (6.[7])	52.74 °F	51.44 °F	51.24 °F	51.95 °F	51.31 °F	50.95 °F	50.83 °F	50.40 °F	50.0 °F	49.17 °F	48.73 °F	48.55 °F	____ °F	____ °F
Container ID # (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
68685 T1	52.96	52.10	52.23	52.88	52.48	52.33	52.39	52.07	51.74	51.0	50.58	50.36		
68685 T2	52.55	51.34	51.45	52.26	51.82	51.66	51.62	51.28	50.89	50.24	49.78	49.60	NA	NA
50532 T4	52.86	52.49	52.49	52.69	52.37	52.24	52.27	52.03	51.75	51.21	50.82	50.66		
50532 T5	52.80	52.30	52.21	52.53	52.13	51.98	51.99	51.75	51.45	~~50.98~~ 50.98	50.58	50.42		
						N/A								

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Z# 124977
INITIAL DA DATE 2-11-15

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6.[6] Date: From 2-11-15 to 2-12-15 Location: 375

Container ID # (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6 [9])	Temp (°F) (6.[8]/6 [9])	Temp (°F) (6 [8]/6.[9])	Temp (°F) (6 [8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
						N/A							N/A	N/A
Ambient Temperature (6.[12])	52.74 °F	51.44 °F	51.24 °F	51.95 °F	51.27 °F	50.96 °F	50.83 °F	50.38 °F	50.0 °F	49.17 °F	48.67 °F	48.55 °F	°F	°F
End Time (6.[13])	1825	1926	2031	2125	2228	2328	0028	0128	0225	0326	0429	0530		
6.[13]	Operator: LQC / Operator: TR	Operator: LQC / Operator: TR	Operator: LQC / Operator: TR	Operator: LQC / Operator: TR	Operator: TR / Operator: LQC	Operator: TR / Operator: LQC	Operator: TR / Operator: LQC	Operator: TR / Operator: LQC	Operator: LQC / Operator: TR	Operator: LQC / Operator: TR	Operator: TR / Operator: LQC	Operator: TR / Operator: LQC	Operator: / Operator:	Operator: / Operator:

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6.[6] Date: From 2-11-15 to 2-12-15 Location: 375

6.[2] Comments: Did not Enter permacon per standing order 1247 R2. All temps are taken from Data logger in control room in Dome 375

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Timmy Romero		234258	TR	2-12-15
William J.		1128044		2-11-15
N/A				

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

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
Carl Mann		226335		2-12-15