From: Juarez, Catherine L
Sent: Thursday, January 15, 2015 4:23 PM
To: Ryan.Flynn@state.nm.us; Jeff.Kendall@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; 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; Haagenstad, Mark P
Subject: Daily Technical Submission - January 15, 2015

Submitted 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 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

January 15, 2015

Participants:

- New Mexico Environment Department: Siona Briley
- LANL – Los Alamos Field Office:
- LANL – Los Alamos National Security: Alison Dorries, Don Allen, Luciana Vigil-Holterman, Tammy Diaz and Cathy Juarez.

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.
            - January 15, 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 January, 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.
            - January 15, 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:

- Verbal and written notifications were provided to NMED-HWB's Steve Pullen on December 29, 2014 regarding the Fire Watch that was established within Dome 231 at 2:30 am on December 29, 2014 after a nitrogen leak was discovered in the dry pipe suppression system located within the Permacon in Dome 231. The Fire Watch will be in effect until the system can be repaired.
    - Repair of multiple sprinkler heads inside Dome 231 is being planned and will be executed after notification to NMED on how the repair plan meets isolation plan requirements.

Next Call: Tuesday, January 20, 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.
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
43.	Schedule a fifth update on LANL efforts – including teams.	LANL/ NMED	---	Complete November 20, 2014

	Requested Information	Actionee	Status	Completion Date
44.	Schedule a sixth update on LANL efforts – including teams.	LANL/ NMED	---	Complete December 9, 2014
45.	NMED requested documentation regarding CIN01 drums.	LANL	In Progress Additions to original questions added during technical phone call December 9, 2014.	
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	Meeting is scheduled for January 29, 2015.	
49.	Fire suppression repair plan for Dome 231	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**
01/15/15	149	426	10341	2690	152	485	13172	1795	103	315	6118	282

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**
01/15/15	351	799	20142	3997	509	857	19339	2480	667	746	15491	2874

Remediated Nitrate Salt Container Headspace Gas Analysis

	SB50522			
Date	**H_2 ppm**	**CO ppm**	**CO_2 ppm**	**N_2O ppm**
01/15/15	1667	474	37855	1002

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 1·12·15 to 1·18·15

	Monday 6.[6] Start Time: 0819	Tuesday 6.[6] Start Time: 0912	Wednesday 6.[6] Start Time: 0927	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: 7/29/15 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])	47.0 45.5 °F JR 1-12-15	48.5 °F	52.0 °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	47.6	47.8	50.8				
S802833	47.7	48.7	50.6				
S801676	48.1	48.0	50.3				
S816810	52.8	53.8	55.7				
70069	52.8	53.1	54.6				
S822844	53.1	54.2	55.1				
S825879	52.4	52.0	54.2				
S793724	52.5	52.5	54.4				
S813545	51.9	51.8	53.4				
S822713	50.7	50.6	52.5				
S802739	49.3	49.6	51.2				
69907	48.7	49.1	50.7				
S804995	49.2	49.5	51.4				
S816434	49.8	50.1	51.8				

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Z# 114186
INITIAL SC DATE 1·12·15

ATTACHMENT 2
Page 2 of 3

6.[6] Date: From 1·12·15 to 1·18·15

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	49.3	50.1	51.8				
S862888	48.9	49.9	51.1				
70072	49.6	49.7	51.0				
S823184	50.7	50.0	52.1				
S822599	51.0	51.5	53.6				
69904	51.9	50.9	54.0				
S805051	52.6	51.7	53.5				
S864213	52.2	52.8	55.1				
S853714	51.6	52.2	54.4				
S803078	52.1	52.1	54.3				
S825878	52.4	52.8	54.7				
S823124	51.7	51.3	53.8				
S804948	49.8	49.9	52.2				
S813385	49.2	49.7	51.4				
S842446	49.6	50.2	52.0				
Ambient Temperature (6.[12])	44.2 °F	49.1 °F	52.3 °F	____ °F	____ °F	____ °F	____ °F
End Time (6.[13])	0834	0917	0934				
6.[13]	Operator: JR Operator: JC	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

ATTACHMENT 2
Page 3 of 3

6.[6] Date: From 1-12-15 to 1-18-15

6.[2] Comments: _____

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Jackie Romero	Jackie Romero	187066	JR	1-12-15
Edward Carlson	Edward Carlson	114188	EC	1-12-15
Josephine Duran	Josephine Duran	157971	JD	1-13-15
THOMAS VIGIL	THOMAS VIGIL	236581	TV	1/13/15
Josephine Duran	Josephine Duran	157971	JD	1/14/15
THOMAS VIGIL	THOMAS VIGIL	236581	TV	1/14/15

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 1-12-15 to 1-18-15

	Monday 6.[6] Start Time: 1142	Tuesday 6.[6] Start Time: 1031	Wednesday 6.[6] Start Time: 1111	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 06/12/15 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])	50.2 °F	50.1 °F	49.3 °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	52.7	52.2	52.6				
LA00000070503 68540	53.1	52.9	52.7				
LA00000070503 68553	51.9	50.7	52.5				
69445	52.2	51.7	52.0				
69618	51.6	50.8	51.0				
69013	53.0	52.2	52.3				
LASB50522	54.4	53.6	54.0				
LASB50452	54.2	54.1	54.1				
LASB50431	54.3	54.3	54.3				
LASB50069	53.4	52.7	53.4				
LASB50073	52.9	53.2	53.5				
69636	54.3	53.8	54.3				
69616	53.7	54.0	53.8				
69417	53.6	53.3	54.5				

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Z# 114188
INITIAL SC DATE 1-12-15

ATTACHMENT 3
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6.[6] Date: From 1-12-15 to 1-18-15

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	53.7	54.4	53.5				
69520	53.8	52.9	53.7				
69641	54.5	53.6	54.3				
69298	54.2	54.4	54.3				
LASB02203	55.0	55.8	54.9				
Ambient Temperature (6.[12])	49.9 °F	49.5 °F	50.3 °F	____ °F	____ °F	____ °F	____ °F
End Time (6.[13])	1147	1036	1116				
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 1.12.15 to 1.18.15

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
THOMAS VIGIL	[signature]	123682	[initials]	1/12/15
Joshua Lopez	[signature]	116598	[initials]	01/12/15
THOMAS VIGIL	[signature]	123682	[initials]	1/13/15
Joshua Lopez	[signature]	116598	[initials]	01/13/15
THOMAS VIGIL	[signature]	123682	[initials]	1/14/15
Joshua Lopez	[signature]	116598	[initials]	01/14/15

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 1·12·15 to 1·18·15

	Monday 6.[6] Start Time: 1148	Tuesday 6.[6] Start Time: 1037	Wednesday 6.[6] Start Time: 1105	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 06/12/15 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])	54.2 °F	51.2 °F	52.6 °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	53.5	50.5	52.3				
68638	54.9	52.7	53.9				
69615	55.6	53.0	54.2				
69635	55.8	53.7	54.5				
69642	54.7	53.0	53.4				
69630	54.4	53.0	52.9				
69633	55.0	53.4	54.0				
68430	55.4	53.2	54.0				
68631	56.1	52.5	53.4				
69634	55.7	52.8	54.8				
68567	52.7	50.8	51.6				
94227	54.4	51.8	53.5				
LASB50442	54.1	52.8	52.9				
69644	54.1	52.8	53.2				
LASB50443	53.4	52.1	52.3				
69638	53.9	52.5	53.3				

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6.[6] Date: From 1·12·15 to 1·18·15

Container ID #	Monday Temp (°F) (6.[8]/6.[9])	Tuesday Temp (°F) (6.[8]/6.[9])	Wednesday Temp (°F) (6.[8]/6.[9])	Thursday Temp (°F) (6.[8]/6.[9])	Friday Temp (°F) (6.[8]/6.[9])	Saturday Temp (°F) (6.[8]/6.[9])	Sunday Temp (°F) (6.[8]/6.[9])
TA-54-375 Cell 2 (continued)							
68624	54.6	53.5	53.3				
68507	53.8	52.9	53.5				
69568	52.4	51.4	50.9				
69553	53.1	51.0	52.7				
69598	51.7	50.8	50.8				
LASB50559	52.8	51.8	51.6				
69015	54.3	53.2	53.4				
69639	55.2	53.5	53.7				
69637	54.3	52.8	53.2				
Ambient Temperature (6.[12])	51.7 °F	51.4 °F	51.5 °F	____ °F	____ °F	____ °F	____ °F
End Time (6.[13])	1155	1043	1111				
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:

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6.[6] Date: From 1·12·15 to 1·18·15

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
THOMAS VIGIL		123582		1/12/15
Joshua Lopez		116598		011715
THOMAS VIGIL		123582		1/13/15
Joshua Lopez		116598		011315
THOMAS VIGIL		123582		1/14/15
Joshua Lopez		116598		011415

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 1·12·15 to 1·18·15

	Monday 6.[6] Start Time: 1157	Tuesday 6.[6] Start Time: 1025	Wednesday 6.[6] Start Time: 1100	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: 06/12/15 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])	53.1 °F	56.7 °F	52.3 °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	53.0	53.8	55.1				
69645	53.8	54.1	54.6				
94068	53.4	53.5	53.7				
93605	54.7	51.9	54.1				
69548	55.0	52.3	54.7				
69604	54.9	53.1	54.9				
LASB50529	54.5	53.5	54.9				
LASB50418	53.9	53.9	54.9				
69036	54.0	53.1	54.2				
LASB50451	54.7	52.0	53.0				
69559	55.3	52.6	54.3				
LASB50448	55.0	51.8	52.9				
Ambient Temperature (6.[12])	52.6 °F	52.7 °F	52.9 °F	°F	°F	°F	°F
End Time (6.[13])	1141	1030	1105				
6.[13]	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

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6.[6] Date: From 1·12·15 to 1·18·15

6.[2] Comments:

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
THOMAS VIGIL		236382	tv	1/12/15
Joshua Lopez		116598	JL	011215
THOMAS VIGIL		236382	tv	1/13/15
Joshua Lopez		116598	JL	011315
THOMAS VIGIL		236382	tv	1/14/15
Joshua Lopez		116598	JL	011415

Operator (print)	Signature	Z#	Initials	Date

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date

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

6.[6] Date: From 01-14-15 to 01-14-15 Location: 375

	Start Time: 6.[6] 0625	Start Time: 6.[6] 0723	Start Time: 6.[6] 0826	Start Time: 6.[6] 0922	Start Time: 6.[6] 1028	Start Time: 6.[6] 1121	Start Time: 6.[6] 1226	Start Time: 6.[6] 1328	Start Time: 6.[6] 1430	Start Time: 6.[6] 1530	Start Time: 6.[6] 1626	Start Time: 6.[6] 1726	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: 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: N/A Cal. Due Date: 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])	50.62 °F	50.63 °F	50.65 °F	50.59 °F	50.74 °F	50.66 °F	50.89 °F	50.85 °F	51.36 °F	50.83 °F	50.72 °F	50.71 °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	52.47	52.58	52.65	52.69	52.68	52.58	52.66	52.69	52.89	52.57	52.45	52.59		
68685T2	51.65	51.67	51.79	51.85	51.83	51.69	51.85	51.88	52.06	51.65	51.58	51.77		
50522T4	51.87	51.93	51.99	51.99	52.03	51.96	52.01	52.01	52.15	51.99	51.91	51.96		
50522T5	51.44	51.49	51.47	51.5	51.57	51.53	51.56	51.56	51.70	51.59	51.52	51.52		

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6.[6] Date: From 01-14-15 to 01-14-15 Location: 01-14-15 ~~39~~ 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])	50.6 °F	50.63	50.69	50.59	50.71 °F	50.69	50.89 °F	50.87 °F	51.08 °F	50.77 °F	50.72 °F	50.71 °F	°F	°F	
End Time (6.[13])	0626	0724	0827	0923	1028	1122	1227	1329	1431	1531	1627	1727			
6.[13] Operator:															
Operator:															

01/14/15

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6.[6] Date: From 01-14-15 to 01-14-15 Location: 375

6.[2] Comments: did not enter permcon due to area G standing order 1247 R2 all temps were takin from data logger computer in Dome 375 no Futher entrys

N/A

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Tina Aguirre	[signature]	[illegible]	[initials]	1-14-15
William Juan	[signature]	201458	[initials]	1-14-15
Joshua Lopez	[signature]	116598	[initials]	011415
N/A				

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

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
Cary Mally	[signature]	226235	[initials]	1-14-15

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

6.[6] Date: From 01-14-15 to 01-15-15 Location: Dome 375

	Start Time: 6.[6] 1829	Start Time: 6.[6] 1927	Start Time: 6.[6] 2025	Start Time: 6.[6] 2125	Start Time: 6.[6] 2222	Start Time: 6.[6] 2324	Start Time: 6.[6] 0028	Start Time: 6.[6] 0127	Start Time: 6.[6] 0229	Start Time: 6.[6] 0325	Start Time: 6.[6] 0425	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])	48.91 °F	48.60 °F	48.12 °F	47.32 °F	46.85 °F	46.16 °F	46.18 °F	46.12 °F	45.64 °F	45.48 °F	45.47 °F	45.25 °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)	50.94	50.72	50.27	49.45	49.1	48.31	48.31	48.25	47.92	47.75	47.64	47.57		
68685 (T2)	50.10	49.82	49.36	48.58	48.17	47.51	47.45	47.48	47.09	46.91	46.85	46.80	NA	NA
50522 (T4)	50.71	50.54	50.18	49.5	49.1	48.58	48.54	48.47	48.19	48.01	47.95	47.86		
50522 (T5)	50.30	50.13	49.8	49.18	48.78	48.25	48.22	48.15	47.89	47.69	47.61	47.54		
						N/A								

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6.[6] Date: From 01-14-15 to 01-15-15 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							NA	NA
Ambient Temperature (6.[12])	48.91 °F	48.60 °F	48.12 °F	47.32 °F	46.85 °F	46.16 °F	46.18 °F	46.12 °F	45.64 °F	45.48 °F	45.47 °F	45.25 °F	°F	°F
End Time (6.[13])	1829	1928	2025	2126	2222	2325	0028	0127	0229	0325	0425	0529		
6.[13]	Operator: TR / Operator: LOC	Operator: TR / Operator: LOC	Operator: LOC / Operator: TR	Operator: LOC / Operator: TR	Operator: LOC / Operator: TR	Operator: LOC / Operator: TR	Operator: LOC / Operator: TR	Operator: LOC / Operator: TR	Operator: LOC / Operator: TR	Operator: LOC / Operator: TR	Operator: LOC / Operator: TR	Operator: TR / Operator: LOC	Operator: / Operator:	Operator: / Operator:

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6.[6] Date: From 01-14-15 to 01-15-15 Location: Dome 375

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

N/A

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Willie J. Cordova	[signature]	112907	WJC	01-15-15
Timmy Romero	[signature]	234253	TR	01-15-15
N/A				

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

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
Gary Maley	[signature]	226235	[initials]	1-15-15