From: Haagenstad, Mark P
Sent: Friday, March 13, 2015 4:27 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; Schreiber, Arleen Thorn; Maestas, Pamela Therese; Hargis, Kenneth Marshall; Juarez, Catherine L; Cabbil, Cheryl Denise; Young, Steven L; Erickson, Randy; Funk, David John; Alexander, Rick A; Frederici, Dave; Juarez, Catherine L; Robinson, Bruce Alan; Lansing, Michael Alan; Tymkowych, John M; Diaz, Tammy; Branch, Yvette S; Guffee, Debi; Haagenstad, Mark P
Subject: Daily Technical Submission - March 13, 2015

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

March 13, 2015

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.
  - Newly suspect nitrate salt-bearing waste containers.
    - Two containers are located in Dome 232 and two containers are located Dome 153.
      - All entry into the domes is currently restricted.
    - Planning is underway to move the containers into the 375 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.
      - March 13, 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 March, LANL has conducted HSG sampling on 55 SWBs.
        - March 13, 2015 HSG data attached.
- **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 occurring.

Other:

Next Call: Tuesday, March 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	---	Complete Email- February 3, 2015 Letter- February 19, 2015
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 did not occur during the repair process. Repair is complete.
50.	NMED requested information regarding solution packages 36, 37, 57 and 78.	LANL	Email sent February 17, 2015. Letter to follow.	
51.	NMED requested copies of any procedures regarding cemetation in bags.	LANL	In progress	
52.	NMED requested information on the percentage of the 55 SWBs that, based on SWB HSG data, appear to have chemical reactions occurring within the waste.	LANL	In progress	

Remediated Nitrate Salt Container Headspace Gas Analysis

	68685				SB50522				69036			
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**
03/13/15	144	388	8109	2090	2025	418	31890	949	81	0	616	149

Remediated Nitrate Salt Container Headspace Gas Analysis

	69548				69559				69604			
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**
03/13/15	14	0	1272	283	257	483	5837	1342	272	179	4113	1275

Remediated Nitrate Salt Container Headspace Gas Analysis

	SB50418				SB50448				SB50451			
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**
03/13/15	393	392	5372	1791	749	473	6490	962	214	197	2630	244

Remediated Nitrate Salt Container Headspace Gas Analysis

	SB50529			
Date	**H_2 ppm**	**CO ppm**	**CO_2 ppm**	**N_2O ppm**
03/13/15	210	294	2519	396

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 3·9·15 to 3·15·15

	Monday 6.[6] Start Time: 0825	Tuesday 6.[6] Start Time: 0933	Wednesday 6.[6] Start Time: 0913	Thursday 6.[6] Start Time: 0900	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: 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
Ambient Temperature (6.[7])	48.6 °F	55.5 °F	56.0 °F	56.7 °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	50.9	52.4	53.6	54.0			
S802833	50.8	52.1	53.3	53.3			
S801676	51.7	52.5	54.2	53.8			
S816810	56.3	58.0	59.3	58.6			
70069	56.6	57.9	59.7	57.3			
S822844	57.1	58.3	59.4	58.8			
S825879	56.6	58.4	59.3	58.3			
S793724	56.8	58.3	59.0	58.4			
S813545	56.0	56.4	57.4	57.0			
S822713	54.3	55.9	57.4	56.3			
S802739	53.1	54.8	55.3	55.1			
69907	52.2	53.7	54.5	54.3			
S804995	52.8	54.4	55.6	55.6			
S816434	53.1	54.1	54.9	55.3			

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INITIAL EC DATE 3·9·15

ATTACHMENT 2
Page 2 of 3

6.[6] Date: From 3-9-15 to 3-15-15

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	52.9	54.0	55.1	55.0			
S862888	53.6	54.1	55.5	55.4			
70072	52.9	54.1	3 hrs 53.0 55.0	55.5			
S823184	54.0	55.5	56.5	56.2			
S822599	54.8	56.4	57.4	56.3			
69904	55.8	56.5	58.0	58.1			
S805051	56.2	56.6	58.3	57.9			
S864213	56.4	57.0	58.5	57.8			
S853714	56.7	57.5	58.9	58.6			
S803078	56.2	57.4	58.8	58.4			
S825878	56.1	57.1	58.6	58.1			
S823124	55.5	56.7	58.1	57.7			
S804948	53.6	54.5	55.8	55.9			
S813385	53.4	53.6	55.3	55.4			
S842446	53.7	54.3	55.9	55.7			
Ambient Temperature (6.[12])	50.3 °F	55.0 °F	56.0 °F	55.4 °F	____ °F	____ °F	____ °F
End Time (6.[13])	0832	0940	0931	0907			
6.[13]	Operator: JR Operator: EC	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

ATTACHMENT 2
Page 3 of 3

6.[6] Date: From 3·9·15 to 3·15·15

6.[2] Comments: _____

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Jackie Romero	Jackie Romero	1187066	JR	13-9-15
Eloy J. Cordova	Eloy J. Cordova	1114188	EC	3·9·15
Josephine Duran	Duran	157971	JD	3/10/15
THOMAS VIGIL	[signature]	236382	TV	3/10/15
Josephine Duran	Duran	157971	JD	3/11/15
THOMAS VIGIL	[signature]	236382	TV	3/11/15
Josephine Duran	Duran	157971	JD	3/12/15
THOMAS VIGIL	[signature]	236382	TV	3/12/15

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 3·9·15 to 3·15·15

	Monday 6.[6] Start Time: 1557	Tuesday 6.[6] Start Time: 1320	Wednesday 6.[6] Start Time: 1406	Thursday 6.[6] Start Time: 1027	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])	55.7 °F	58.9 °F	62.8 °F	53.6 °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])
68685	56.6	59.5	62.4	53.7			
LA00000070503 68540	56.6	59.0	62.4	53.8			
LA00000070503 68553	56.8	59.2	62.3	54.0			
69445	57.1	59.2	62.2	53.6			
69618	56.5	57.1	61.8	53.3			
69013	56.9	59.1	62.4	54.3			
LASB50522	57.0	59.0	62.3	55.0			
LASB50452	57.0	58.9	62.3	54.9			
LASB50431	57.1	58.9	62.7	54.6			
LASB50069	56.6	58.2	62.0	54.2			
LASB50073	56.6	58.8	61.3	54.4			
69636	57.2	58.9	61.9	54.6			
69616	57.2	59.4	62.3	54.2			
69417	57.7	59.2	62.3	54.6			

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INITIAL EC DATE 3·9·15

ATTACHMENT 3
Page 2 of 3

6.[6] Date: From 3·9·15 to 3·15·15

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 1 (continued)							
69620	57.0	59.0	61.9	54.6			
69520	57.5	59.1	62.0	54.9			
69641	57.5	58.9	62.7	55.0			
69298	57.8	58.1	62.5	55.3			
LASB02203	57.1	58.8	62.0	55.0			
Ambient Temperature (6.[12])	56.3 °F	58.8 °F	62.4 °F	52.5 °F	____ °F	____ °F	____ °F
End Time (6.[13])	1601	1323	1410	1032			
6.[13]	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

6.[2] Comments:

ATTACHMENT 3
Page 3 of 3

6.[6] Date: From 3·9·15 to 3·15·15

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
THOMAS Vigil		123382	tv	3/9/15
Joshua Lopez		116598	JL	030915
Norman Sanchez		187818	NS	3/10/15
Pancho Mierra		135765	PM	3-10-15
THOMAS Vigil		123382	tv	3/11/15
Joshua Lopez		116598	JL	031115
THOMAS Vigil		123382	tv	3/12/15

Operator (print)	Signature	Z#	Initials	Date
Joshua Lopez		116598	JL	031215

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 3·9·15 to 3·15·15

	Monday 6.[6] Start Time: 1602	Tuesday 6.[6] Start Time: 1324	Wednesday 6.[6] Start Time: 1341	Thursday 6.[6] Start Time: 1033	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])	58.2 °F	59.6 °F	62.0 °F	55.9 °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	57.0	58.4	60.9	56.3			
68638	57.8	59.2	62.0	56.7			
69615	58.0	60.0	62.0	56.2			
69635	58.7	60.7	63.8	56.7			
69642	58.0	60.3	62.8	56.0			
69630	58.0	60.5	63.0	56.1			
69633	59.9	60.4	62.8	56.7			
68430	59.0	60.0	62.8	56.2			
68631	57.9	59.8	62.6	56.2			
69634	58.0	58.6	61.9	56.7			
68567	57.3	57.6	60.9	56.0			
94227	57.8	59.8	61.9	55.8			
LASB50442	58.7	59.9	62.5	56.8			
69644	58.5	60.0	62.9	56.9			
LASB50443	57.9	59.3	62.1	56.2			
69638	58.7	61.7	62.3	56.9			

WORKING COPY
Z# 114188
INITIAL EC DATE 3-9-15

ATTACHMENT 4
Page 2 of 3

6.[6] Date: From 3·9·15 to 3·15·15

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	58.5	59.9	63.1	57.4			
68507	58.6	60.7	62.7	57.8			
69568	58.0	60.4	58.9	57.8			
69553	57.3	57.4	60.8	57.2			
69598	57.3	58.6	58.6	57.3			
LASB50559	57.9	60.0	63.4	56.5			
69015	58.7	60.5	62.5	57.1			
69639	59.1	60.7	62.6	57.4			
69637	58.7	61.4	62.9	57.3			
Ambient Temperature (6.[12])	57.8 °F	59.6 °F	61.7 °F	57.1 °F	____ °F	____ °F	____ °F
End Time (6.[13])	1607	1327	1417	1640			
6.[13]	Operator: ____ Operator: ____	Operator: NS Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

6.[2] Comments:

ATTACHMENT 4
Page 3 of 3

6.[6] Date: From 3·9·15 to 3·15·15

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
THOMAS VEATH		123382		3/9/15
Joshua Lopez		116598		03/09/15
Norman Sanchez		187818	NS	3/10/15
Pancho Mieva		123565		3-10-15
THOMAS VEATH		123382		3/11/15
Joshua Lopez		116598		03/11/15
THOMAS VEATH		123382		3/12/15

Operator (print)	Signature	Z#	Initials	Date
Joshua Lopez		116598		03/25/15

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date

ATTACHMENT 5
Page 1 of 2

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

6.[6] Date: From 3-9-15 to 3-15-15

	Monday 6.[6] Start Time: 1551	Tuesday 6.[6] Start Time: 1316	Wednesday 6.[6] Start Time: 1401	Thursday 6.[6] Start Time: 1021	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: Fluke Model: 561 Cal. Due Date: 6/12/15 File Number 101916	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[7])	57.7 °F	58.8 °F	62.5 °F	54.9 °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	58.4	61.1	62.5	56.9			
69645	58.6	59.9	62.7	56.6			
94068	58.3	60.0	62.7	55.9			
93605	58.1	58.4	62.7	56.3			
69548	58.0	59.9	62.4	57.3			
69604	58.3	59.2	62.4	57.3			
LASB50529	58.7	59.5	62.8	56.5			
LASB50418	58.0	60.1	62.5	56.5			
69036	57.9	60.3	62.9	55.4			
LASB50451	57.9	59.7	62.4	55.4			
69559	57.9	59.5	63.2	56.0			
LASB50448	57.1	59.6	61.9	55.4			
Ambient Temperature (6.[12])	57.2 °F	59.7 °F	62.8 °F	56.1 °F	°F	°F	°F
End Time (6.[13])	1556	1318	1405	1026			
6.[13]	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

WORKING COPY
Z# 114188
INITIAL EC DATE 3-9-15

ATTACHMENT 5
Page 2 of 2

6.[6] Date: From 3-9-15 to 3-15-15

6.[2] Comments:

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
THOMAS Vigil		236382	tv	3/9/15
Joshua Lopez		116578	JL	03/09/15
Norman Sanchez		187818	NS	3/10/15
Pancho Miera		235766	PM	3-10-15
Thomas Vigil		236382	tv	3/11/15
Joshua Lopez		116578	JL	03/11/15
THOMAS VIGIL		236382	tv	3/12/15
Joshua Lopez		116578	JL	03/13/15
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
	/	/	/	/

ATTACHMENT 6
Page 1 of 3

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

6.[6] Date: From 3-12-15 to 3-12-15 Location: 375

	Start Time: 6.[6] 0628	Start Time: 6.[6] 0729	Start Time: 6.[6] 0822	Start Time: 6.[6] 9:35	Start Time: 6.[6] 1024	Start Time: 6.[6] 1124	Start Time: 6.[6] 12:25	Start Time: 6.[6] 1324	Start Time: 6.[6] 1428	Start Time: 6.[6] 1527	Start Time: 6.[6] 1624	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: 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	51.86 °F	52.31 °F	52.96 °F	51.78 °F	52.87 °F	55.27 °F	57.82 °F	60.07 °F	61.60 °F	61.52 °F	61.40 °F	60.21 °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	52.74	53.16	53.49	52.77	53.01	55.25	57.84	59.89	61.34	61.46	61.32	60.16		N/A
68685 T2	51.99	52.66	52.99	51.70	52.53	54.70	57.02	58.96	60.34	60.46	60.37	59.30		
50522 T4	53.12	53.24	53.94	52.77	53.25	54.74	56.69	58.30	59.41	59.79	59.83	59.09		
50522 T5	52.88	53.12	53.90	52.56	53.16	54.83	56.8	58.39	59.57	59.73	59.69	58.86		

N/A

WORKING COPY
Z# 226235
INITIAL JJM DATE 3-12-15

ATTACHMENT 6
Page 2 of 3

6.[6] Date: From 3-12-15 to 3-12-15 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])	Temp (°F) (6.[8]/6.[9])
Ambient Temperature (6.[12]) TS	51.86 °F	52.31 °F	52.96 °F	51.8 °F	52.87 °F	55.28 °F	57.89 °F	60.10 °F	61.60 °F	61.52 °F	61.40 °F	60.21 °F	°F	°F		
End Time (6.[13])	0628	0727	0822	09:27	1024	1125	1226	1325	1428	1527	1624	1723				
6 [13]	Operator: WT Operator: SC	Operator: WT Operator: SC	Operator: WT Operator: SC	Operator: SC Operator: WT	Operator: WT Operator: SC	Operator: WT Operator: BA	Operator: BA Operator: SC	Operator: WT Operator: SC	Operator: WT Operator: KM	Operator: KM Operator: WT	Operator: WT Operator: SC	Operator: WT Operator: BA	Operator: Operator:	Operator: Operator:		

ATTACHMENT 6
Page 3 of 3

6.[6] Date: From 3-12-15 to 3-12-15 Location: 375

6.[2] Comments: did Not enter permacen due to area G standing order 1246 R 2 all temps were taking from data logger computer in Dome 375 no further entrys

N/A

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
William Warne	[signature]	201458	WT	3-12-15
Jesse Chavez	[signature]	214578	JC	3-12-15
Tina Aguirre	[signature]	124977	TA	3-12-15
R Dahlberg	[signature]	163216	[illegible]	03/12/15

N/A

Operator (print)	Signature	Z#	Initials	Date

N/A

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
[illegible]	[signature]	236351	[illegible]	3-12-15

ATTACHMENT 6
Page 1 of 3

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

6.[6] Date: From 3-12-15 to 3-13-15 Location: 375

	Start Time: 6.[6] 1823	Start Time: 6.[6] 1924	Start Time: 6.[6] 2026	Start Time: 6.[6] 2127	Start Time: 6.[6] 2230	Start Time: 6.[6] 2329	Start Time: 6.[6] 0030	Start Time: 6.[6] 0127	Start Time: 6.[6] 0228	Start Time: 6.[6] 0326	Start Time: 6.[6] 0425	Start Time: 6.[6] 0523	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: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[7])	58.32 °F	57.41 °F	56.14 °F	55.15 °F	54.77 °F	54.81 °F	54.96 °F	54.79 °F	54.52 °F	54.09 °F	53.02 °F	52.59 °F	°F	°F N/A
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	58.39	57.40	56.14	55.21	54.83	54.87	55.08	54.90	54.64	54.23	53.23	52.83		
68685 T2	57.58	56.65	55.47	54.58	54.34	54.38	54.57	54.39	54.15	53.71	52.71	52.29		
50522 T4	57.80	57.03	56.05	55.27	54.95	55.0	55.05	54.97	54.79	54.47	53.71	53.38		
50522 T5	57.57	56.77	55.84	55.08	54.85	54.87	54.97	54.85	54.67	54.35	53.52	53.21		
						N/A				N/A				

WORKING COPY
Z# 226235
INITIAL BBM DATE 3-12-15

ATTACHMENT 6
Page 2 of 3

6.[6] Date: From 3-12-15 to 3-13-15 Location: 325

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])	58.32 °F	57.41 °F	56.14 °F	55.15 °F	54.75 °F	54.81 °F	54.96 °F	54.79 °F	54.52 °F	54.09 °F	53.02 °F	52.59 °F	____ °F	____ °F
End Time (6.[13])	1823	1925	2026	2127	2231	2329	0030	0127	0229	0326	0425	~~0524~~		
6.[13]	Operator: WJC Operator: TR	Operator: WJC Operator: TR	Operator: WJC Operator: TR	Operator: WJC Operator: TR	Operator: WJC Operator: TR	Operator: WJC Operator: TR	Operator: WJC Operator: TR	Operator: WJC Operator: TR	Operator: WJC Operator: TR	Operator: WJC Operator: TR	Operator: WJC Operator: TR	Operator: WJC Operator: TR	Operator: ____ Operator: ____	Operator: ____ Operator: ____

ATTACHMENT 6
Page 3 of 3

6.[6] Date: From 3-12-15 to 3-13-15 Location: 375

6.[2] Comments: Did not enter dome 375 Bermacon Per Standing Order 1247 Rev 2. Temperatures taken from dome 375 control room using data logger.

no further entries @ 0530 3-13-15 Z# 112907

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
William J. Corbett		112907		3-12-15
Jimmy Romero Jr		123458	TR	3-13-15
	N/A			

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

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date