From: Haagenstad, Mark P
Sent: Thursday, January 22, 2015 5:12 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; Haagenstad, Mark P
Subject: Daily Technical Submission - January 22, 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

January 22, 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.

- **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 22, 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 55 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 22, 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 if waste containers must be moved.

Next Call: Tuesday, January 27, 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	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	
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**
01/22/15	144	400	11050	2860	184	492	13700	1898	105	298	6560	328

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**
01/22/15	315	694	18549	3768	397	786	18061	2317	669	640	14583	2690

Remediated Nitrate Salt Container Headspace Gas Analysis

	SB50522			
Date	**H_2 ppm**	**CO ppm**	**CO_2 ppm**	**N_2O ppm**
01/22/15	1760	434	39451	1039

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

6.[6] Date: From 1·19·15 to 1·25·15

	Monday 6.[6] Start Time: 0845	Tuesday 6.[6] Start Time: 0954	Wednesday 6.[6] Start Time: 0950	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])	45.7 °F	56.3 °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])
S818435	47.7	52.1	50.5				
S802833	48.1	49.4	51.1				
S801676	47.9	50.5	51.1				
S816810	52.4	52.7	52.6				
70069	52.7	53.5	52.5				
S822844	52.7	52.6	52.4				
S825879	51.4	53.0	53.0				
S793724	51.7	53.5	53.7				
S813545	51.6	53.2	53.6				
S822713	49.8	52.5	52.9				
S802739	49.5	52.2	52.8				
69907	49.1	52.5	52.0				
S804995	49.6	52.0	51.3				
S816434	49.8	51.8	51.6				

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INITIAL EC DATE 1·19·15

ATTACHMENT 2
Page 2 of 3

6.[6] Date: From 1-19-15 to 1-25-15

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	50.5	51.7	51.6				
S862888	49.7	51.8	51.3				
70072	50.2	53.4	51.4				
S823184	50.4	54.7	57.9				
S822599	51.3	52.3	53.3				
69904	52.1	55.8	57.9				
S805051	51.5	53.3	53.0				
S864213	52.5	53.3	55.7				
S853714	52.0	53.4	~~55.6~~ 55.6				
S803078	51.7	53.1	51.6				
S825878	52.3	53.5	52.9				
S823124	51.4	53.2	52.5				
S804948	50.1	53.7	52.8				
S813385	49.5	53.0	51.7				
S842446	50.2	52.0	51.4				
Ambient Temperature (6.[12])	46.2 °F	51.1 °F	49.1 °F	____ °F	____ °F	____ °F	____ °F
End Time (6.[13])	0853	1004	1054				
6.[13]	Operator: JR Operator: EC	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

ATTACHMENT 2
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6.[6] Date: From 1-19-15 to 1-25-15

6.[2] Comments: _____

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Jackie Romero	Jackie Romero	187066	JR	1-19-15
E/o T.D. Coldwell	[signature]	114188	EC	1-19-15
Josephine Duran	Duran	15797	[signature]	1/20/15
Joshua Lopez	[signature]	116598	[signature]	01/2015
Alfredo Aguilar	[signature]	129328	AA	1/21/15
Joshua Lopez	[signature]	116598	[signature]	01/21/15

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 1-19-15 to 1-25-15

	Monday 6.[6] Start Time: 0752	Tuesday 6.[6] Start Time: 1018	Wednesday 6.[6] Start Time: 1137	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: 06/12/15 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])	45.9 °F	50.5 °F	49.4 °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])
68685	49.3	53.1	52.5				
LA00000070503 68540	48.5	53.1	52.7				
LA00000070503 68553	49.5	53.0	52.5				
69445	47.9	52.9	52.7				
69618	46.8	52.4	51.2				
69013	48.7	53.0	52.6				
LASB50522	50.8	53.8	53.9				
LASB50452	51.4	54.1	54.1				
LASB50431	51.1	54.0	54.5				
LASB50069	49.7	53.5	53.5				
LASB50073	50.2	53.4	53.7				
69636	51.3	54.0	54.3				
69616	50.5	53.0	53.9				
69417	50.5	53.7	54.7				

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INITIAL EC DATE 1-19-15

ATTACHMENT 3
Page 2 of 3

6.[6] Date: From 1-19-15 to 1-25-15

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	50.1	53.5	53.6				
69520	50.5	53.7	53.8				
69641	50.8	54.2	1040 54.3				
69298	51.3	54.7	1141 54.4				
LASB02203	51.5	54.4	54.6				
Ambient Temperature (6.[12])	45.9 °F	48.4 °F	50.1 °F	°F	°F	°F	°F
End Time (6.[13])	0759	1023	1141				
6.[13]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

6.[2] Comments:

ATTACHMENT 3
Page 3 of 3

6.[6] Date: From 1-19-15 to 1-25-15

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
THOMAS VIGIL		123682	tv	1/19/15
Joshua Lopez		116598	JL	01/19/15
Josephine Durand		105971	JD	1/20/15
Joshua Lopez		116598	JL	01/20/15
Alfredo Aguilar		129178	AA	1/21/15
Joshua Lopez		116598	JL	01/21/15
	/	/	/	/
Operator (print)	Signature	Z#	Initials	Date

Operator (print)	Signature	Z#	Initials	Date
	/	/	/	/
Operator (print)	Signature	Z#	Initials	Date
	/	/	/	/
Operator (print)	Signature	Z#	Initials	Date
	/	/	/	/
Operator (print)	Signature	Z#	Initials	Date
	/	/	/	/
Operator (print)	Signature	Z#	Initials	Date
	/	/	/	/
Operator (print)	Signature	Z#	Initials	Date
	/	/	/	/
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 1-19-15 to 1-25-15

	Monday 6.[6] Start Time: 0800	Tuesday 6.[6] Start Time: 1021	Wednesday 6.[6] Start Time: 1143	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: 10/7/15 File Number 101912	Brand: FLUKE Model: 561 Cal. Due Date: 6/11/15 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])	51.0 °F	55.4 °F	52.4 °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])
LASB02198	50.0	54.2	52.7				
68638	51.0	55.5	53.9				
69615	51.5	55.9	54.0				
69635	52.2	56.5	54.6				
69642	51.2	55.7	53.7				
69630	50.9	55.5	53.4				
69633	52.0	55.8	56.0				
68430	51.9	55.4	54.3				
68631	51.0	55.5	53.4				
69634	52.2	56.2	53.0				
68567	49.4	53.6	52.1				
94227	51.4	55.0	53.7				
LASB50442	51.5	55.0	53.9				
69644	51.1	55.2	53.7				
LASB50443	50.6	54.5	53.4				
69638	51.1	55.5	53.4				

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6.[6] Date: From 1-19-15 to 1-25-15

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	53.7	57.3	53.8				
68507	51.0	55.1	53.9				
69568	50.9	54.0	53.4				
69553	48.6	53.3	51.9				
69598	49.4	52.8	51.7				
LASB50559	49.8	54.2	52.2				
69015	52.0	55.5	54.4				
69639	52.1	56.4	54.1				
69637	51.0	56.0	54.8				
Ambient Temperature (6.[12])	51.3 °F	55.7 °F	51.9 °F	____ °F	____ °F	____ °F	____ °F
End Time (6.[13])	0806	1029	1146				
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 1-19-15 to 1-25-15

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
THOMAS [illegible]	[signature]	236382	[signature]	1/19/15
Joshua Lopez	[signature]	116578	JLR	011915
Josephine Duran	[signature]	157971	JD	1/20/15
Joshua Lopez	[signature]	116578	JLR	012015
Alfredo Aguilar	[signature]	174378	AA	1/21/15
Joshua Lopez	[signature]	116578	JLR	012115
	/	/	/	/
Operator (print)	Signature	Z#	Initials	Date

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

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 1-19-15 to 1-25-15

	Monday 6.[6] Start Time: 0748	Tuesday 6.[6] Start Time: 1012	Wednesday 6.[6] Start Time: 1123	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: 06/12/15 File Number 101916	Brand: Fluke Model: 561/06/12/15 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])	46.6 °F	53.1 °F	51.7 °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])
69519	51.1	55.4	54.8				
69645	51.4	55.3	54.7				
94068	50.3	55.0	54.2				
93605	49.3	54.1	53.3				
69548	49.8	54.3	54.6				
69604	49.8	54.8	54.7				
LASB50529	50.5	55.1	55.7				
LASB50418	50.8	55.2	54.1				
69036	49.9	54.9	52.8				
LASB50451	48.4	53.6	53.4				
69559	49.7	53.9	53.5				
LASB50448	48.4	53.3	52.7				
Ambient Temperature (6.[12])	47.3 °F	52.9 °F	52.0 °F	°F	°F	°F	°F
End Time (6.[13])	0751	1017	1130				
6.[13]	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

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INITIAL [illegible] DATE [illegible]

ATTACHMENT 5
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6.[6] Date: From 1-19-15 to 1-25-15

6.[2] Comments:

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
THOMAS VIGIL		236382		1/19/15
Joshua Lopez		116598		01/19/15
Josephine Duran		115971		1/20/15
Joshua Lopez		116598		01/20/15
Alfredo Aguilar		293178		1/21/15
Joshua Lopez		116598		01/21/15

Operator (print)	Signature	Z#	Initials	Date

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 1-21-15 to 1-21-15 Location: 375

	Start Time: 6.[6] 0627	Start Time: 6.[6] 0723	Start Time: 6.[6] 0822	Start Time: 6.[6] 0923	Start Time: 6.[6] 1021	Start Time: 6.[6] 1122	Start Time: 6.[6] 1225	Start Time: 6.[6] 1324	Start Time: 6.[6] 1423	Start Time: 6.[6] 1527	Start Time: 6.[6] 1624	Start Time: 6.[6] 1722	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])	50.92 °F	50.85 °F	50.95 °F	50.67 °F	50.85 °F	50.87 °F	50.69 °F	50.93 °F	51.01 °F	50.89 °F	50.68 °F	50.82 °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+1	52.61	52.65	52.81	52.53	52.76	52.95	52.51	52.71	52.79	52.64	52.48	52.66 51.9		
68685+2	51.77	51.88	51.92	51.69	51.85	52.15	51.69	51.89	52.00	51.78	51.69	51.95 52.07		
50522+4	52.00	52.01	52.07	51.95	52.1	52.24	51.96	52.07	52.12	52.04	~~52.03~~ 51.95			
50522+5	51.64	51.65	51.69	51.58	51.66	51.69	51.58	51.68	51.74	51.65	51.58	51.66		

N/A

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6.[6] Date: From 1-21-15 to 1-21-15 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])

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6.[6] Date: From 1-21-15 to 1-21-15 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 No Further entrys

N/A

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
William Sievers	William Sievers	201458	WS	1-21-15
Tina Aguirre	Tina Aguirre	174977	TA	1-21-15

N/A

Operator (print)	Signature	Z#	Initials	Date

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
Tammy Reilly	Tammy Reilly	376231	TR	11-21-15

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

6.[6] Date: From 1-21-15 to 1-22-15 Location: 375

	Start Time: 6.[6] 1830	Start Time: 6.[6] 1927	Start Time: 6.[6] 2023	Start Time: 6.[6] 2124	Start Time: 6.[6] 2226	Start Time: 6.[6] 2328	Start Time: 6.[6] 0024	Start Time: 6.[6] 0127	Start Time: 6.[6] 0222	Start Time: 6.[6] 0325	Start Time: 6.[6] 0425	Start Time: 6.[6] 0530	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: Cal. Due Date: File Number:	Brand: Model: Cal. Due Date: File Number:	Brand: Model: Cal. Due Date: File Number:
Ambient Temperature (6.[7])	50.82 °F	50.76 °F	50.69 °F	50.36 °F	50.23 °F	50.04 °F	49.31 °F	48.98 °F	48.73 °F	48.60 °F	48.44 °F	47.77 °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])	N/A Temp (°F) (6.[8]/6.[9])
T-1 68685	52.59	52.62	52.58	52.27	52.22	51.96	51.4	50.97	50.76	50.62	50.38	49.87		
T-2 68685	51.78	51.83	51.79	51.40	51.35	51.07	50.53	50.13	49.92	49.69	49.46	48.91		
T-4 50522	52.04	52.03	51.99	51.75	51.70	51.53	51.08	50.75	50.60	50.48	50.32	49.87		
T-5 50522	51.67	51.61	51.58	51.34	51.29	51.10	50.68	50.37	50.23	50.13	50.0	49.56		
					N/A									

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6.[6] Date: From 1-21-15 to 1-22-15 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])
Ambient Temperature (6.[12])	50.82 °F	50.76 °F	50.69 °F	50.36 °F	50.23 °F	50.04 °F	49.31 °F	48.98 °F	48.73 °F	48.62 °F	48.44 °F	47.80 °F	____ °F	____ °F	
End Time (6.[13])	1830	1927	2025	2124	2226	2328	0025	0128	0222	0326	0425	0531			
6.[13]	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: LOC Operator: TR	Operator: LOC Operator: TR	Operator: TR Operator: LOC	Operator: Operator:	Operator: Operator:	

N/A

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6.[6] Date: From 1-21-15 to 1-22-15 Location: 375

6.[2] Comments: Did not enter Dome 375 permacon per Standing Order 1247 Rev. 2. Temperatures are taken from Dome 375 Control Room using data logger.

no further entries my Rm 01-22-15

6.[17] Performed by:

Operator (print)	Signature	Z#	Initials	Date
William S. Conbett		1109	WSC	1-22-15
Timmy Romero		234253	TR	1-22-15
	/	/	/	/
	/	/	/	/
	/	/	/	/