From: Haagenstad, Mark P
Sent: Friday, October 17, 2014 4:15 PM
To: Ryan.Flynn@state.nm.us; Jeff.Kendall@state.nm.us; tom.blaine@state.nm.us; John Kieling; steve.pullen@state.nm.us; Kliphuis, Trais, NMENV; Timothy.Hall@state.nm.us; siona.briley@state.nm.us; ricardo.maestas@state.nm.us; Gregory.Lauer@state.nm.us; steve.holmes@state.nm.us; coleman.smith@state.nm.us
Cc: Pete Maggiore; Silas DeRoma; Cummings, Lisa K; Nickless, David J; Bishop, M. Lee; Turner, Gene E; Armijo, Karen (CONTR); Wallace, Terry C; Torres, Enrique; Woitte, Deborah Kay; Clemmons, Steve; Allen, Don; Roberts, Kathryn Margaret; Brandt, Michael Thomas; Sharp-Geiger, Raeanna Racine; Dorries, Alison Marie; Grieggs, Tony; Bacigalupa, Gian A; Vigil-Holterman, Luciana R; Alexander, Rick A; Baumer, Andy; Martinez, Saundra; Sauer, Selena Z; Wood, Yvonne Barbara; Schreiber, Arleen Thorn; Maestas, Pamela Therese; Hargis, Kenneth Marshall; Diaz, Tammy; Juarez, Catherine L; Beard, Carl Allen; Cabbil, Cheryl Denise; Young, Steven L; Erickson, Randy; Funk, David John; Alexander, Rick A; Frederici, Dave
Subject: Daily Technical Submission - October 17, 2014

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

Please contact me if additional information would be helpful. Thank you.

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

October 17, 2014

LANL Technical Update:

- **Location of Nitrate Salt-Bearing Wastes**
  - Remediated nitrate salt-bearing waste containers.
    - All containers remain in the 375 Permacon.
  - Unremediated nitrate salt-bearing waste containers.
    - All containers remain in the 231 Permacon.
- **Monitoring - Daily Temperature**
  - Temperatures remain below 90°F.
    - Previous days' daily temperature data attached.
- **Monitoring – Visual Inspections**
  - No abnormal conditions were observed.
- **Monitoring – headspace gas (HSG)**
  - Containers (SWBs) 68685 and SB50522.
    - Continue daily head space gas (HSG) sample collection.
      - October 17, 2014 HSG data attached
        - H_2, CO, CO_2 and N_2O
  - Other containers
    - A minimum of once per month HSG sampling will be conducted.
      - To date in October, LANL has conducted HSG sampling on 47 SWBs.
        - October 17, 2014, HSG data attached for 5 additional SWBs.
      - Note: LANL previously conducted HSG sampling on each of the 55 SWBs that contain 55-gallon drums of remediated nitrate salt-bearing waste (under Section I of the Isolation Plan).
- **Additional measures currently underway**
  - As a conservative measure, LANL is currently conducting additional monitoring. This additional monitoring includes:
    - Containers (SWB) 68685 and SB50522.
      - LANL continuing *solid phase micro-extraction*.
      - Hourly temperature measurements are currently being performed on SWB 68685 and SB50522.

        - Five (5) other SWB overpacks (containing 55-gallon drums of remediated nitrate salt-bearing waste).
            - Continue twice-weekly HSG sample collection.

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

- **Other:**

The following documents were inadvertently delayed in being entered into the LANL electronic information repository (Electronic Public Reading Room [EPRR], eprr.lanl.gov) as required by the Administrative Order:

- Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers- Package 12, delivered on September 22, 2014
- Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers- Package 15, delivered on September 23, 2014
- Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers- Package 18, delivered on October 8, 2014

However, the documents were placed into the Hardcopy Public Reading Room (HPRR). These documents will be submitted to the EPRR this evening (10/17/2014) and be available in the EPRR on Monday (10/20/2014). LANL provided a verbal notification to NMED-HWB regarding the delayed submittals on 10/17/2014.

Summary Chart - Requested Information / Pending Issues:

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

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

	Requested Information	Actionee	Status	Completion Date
13.	Respond to NMED email request for information associated with the nitrate salt-bearing parent and daughter waste containers. WIPP Recovery Daily Meeting Action List item #84 – NMED requested a copy of the LANL remediation records for waste stored in Panel 6 (Trais Kliphuis) – is a subset of the information in item 5 of this action.	LANL	In progress – remaining are portions of item 5	Partially 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)

	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

	Requested Information	Actionee	Status	Completion Date
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)
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

	Requested Information	Actionee	Status	Completion Date
33.	NMED request regarding literature review of catalytic reactions.	LANL	Literature review is a pre-decisional draft/working document not for external release	August 25, 2014
34.	LANL requested to schedule a meeting with NMED on remediation planning and schedules.	LANL / NMED	In Progress Meeting scheduled for Monday September 29th	Complete September 29, 2014 (meeting held)
35.	Schedule a third update on LANL efforts – including teams.	LANL / NMED	In progress. Currently scheduled for October 20, 2014	
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	In progress	
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.
39.	NMED requested a diagram of the location of the thermocouples on 68685 and SB50522	LANL	In progress	
40.	NMED requested a copy of the safety basis document for remediation planning when it is finalized.	LANL	Document is currently in Draft.	

Next Call: Tuesday, October 21, 2014

Remediated Nitrate Salt Container Headspace Gas Analysis

	68685				SB50522				69548			
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**
10/17/14	130	764	18625	5733	5211	419	53754	989	14	0	1950	507

Remediated Nitrate Salt Container Headspace Gas Analysis

	93605				94068				SB50073			
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**
10/17/14	288	654	8233	2549	458	1151	19889	5485	820	873	7008	1807

Remediated Nitrate Salt Container Headspace Gas Analysis

	SB50448			
Date	**H_2 ppm**	**CO ppm**	**CO_2 ppm**	**N_2O ppm**
10/17/14	880	565	9452	1257

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 10-13-14 to 10-19-14

	Monday 6.[6] Start Time: 0824	Tuesday 6.[6] Start Time: 1309	Wednesday 6.[6] Start Time: 0909	Thursday 10-16-14 6.[6] Start Time: ~~1325~~	Friday 6.[6] Start Time:	Saturday 6.[6] Start Time:	Sunday 6.[6] Start Time:
TA-54-231				Start Time: 0933			
Calibrated Infrared Thermometer (6.[7])	Brand: Fluke Model: 561 Cal. Due Date: 7-29-15 File Number 101974	Brand: Fluke Model: 561 Cal. Due Date: 7/29/15 File Number 101974	Brand: Fluke Model: 561 Cal. Due Date: 7/29/15 File Number 101974	Brand: Fluke Model: 561 Cal. Due Date: 7/29/15 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.[9])	46.8 °F	63.8 °F	48.8 °F	WM 10-15-14 ~~64.0~~ 56.0 °F	°F	°F	°F
Container ID #	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
S818435	47.2	63.5	51.0	63.9 55.1			
S802833	46.5	62.3	51.1	63.8 54.1			
S801676	46.7	62.1	49.9	63.7 54.0			
S816810	44.5	62.1	48.1	63.1 53.2			
70069	43.8	62.3	47.7	63.3 52.8			
S822844	44.2	63.4	48.1	10/18/14 63.1 53.3			
S825879	44.0	63.7	48.2	63.0 52.7			
S793724	44.4	63.3	47.8	63.0 52.0			
S813545	44.9	62.2	48.3	63.2 55.0			
S822713	46.3	63.1	49.9	63.0 55.0			
S802739	46.2	63.0	50.0	63.0 53.8			
69907	46.3	62.5	50.1	63.1 53.3			
S804995	47.1	63.1	50.2	54.4			
S816434	48.4	63.0	51.9	56.9			

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ATTACHMENT 2
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6.[6] Date: From 10·13·14 to 10·19·14

Container ID #	Monday Temp (°F) (6.[10]/6.[11])	Tuesday Temp (°F) (6.[10]/6.[11])	Wednesday Temp (°F) (6.[10]/6.[11])	Thursday Temp (°F) (6.[10]/6.[11])	Friday Temp (°F) (6.[10]/6.[11])	Saturday Temp (°F) (6.[10]/6.[11])	Sunday Temp (°F) (6.[10]/6.[11])
TA-54-231 (continued)							
S805289	48.4	64.0	51.4	54.2			
S862888	47.7	62.5	51.2	53.5			
70072	47.1	62.7	51.4	53.7			
S823184	46.9	63.5	50.3	54.2			
S822599	46.1	63.4	49.9	52.7			
69904	45.1	62.7	48.5	52.5			
S805051	44.8	62.6	48.3	52.4			
S864213	45.0	62.5	48.3	52.8			
S853714	44.5	63.4	48.5	53.1			
S803078	44.2	64.4	48.9	52.8			
S825878	44.8	63.8	48.8	53.4			
S823124	45.4	63.4	49.1	53.9			
S804948	47.2	62.9	50.3	54.0			
S813385	47.7	63.7	51.0	54.1			
S842446	49.7	63.8	52.8	56.2			
Ambient Temperature (6.[14])	47.1 °F	64.4 °F	50.1 °F	54.5 °F	°F	°F	°F
End Time (6.[15])	0829	0917	0920	0943			
6.[15]	Operator: JR Operator:	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: Operator:	Operator: Operator:	Operator: Operator:

ATTACHMENT 2
Page 3 of 3

6.[6] Date: From 10·13·14 to 10·19·14

6.[2] Comments: 10-15-14: Operators began filling out Thursdays Temps for the wrong cell and realized they were using the wrong attachment. Weight Mark 219908.

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Jackie Romero	Jackie Romero	187066	JR	10-13-14
Elena Gardea	[illegible]	114188	EG	10·13·14
Josephine Duran	[illegible]	151971	[illegible]	10/14/14
Nicholas Vigil	[illegible]	236382	[illegible]	10/14/14
Josefina Lopez	[illegible]	116598	[illegible]	10/15/14
Nicholas Vigil	[illegible]	236382	[illegible]	10/15/14
Josephine Duran	[illegible]	151971	[illegible]	10/16/14
Alfredo Aguilar	Alfredo Aguilar	293128	AA	10/16/14

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date

ATTACHMENT 3
Page 1 of 3

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

6.[6] Date: From 10·13·14 to 10·19·14

	Monday 6.[6] Start Time: 0955	Tuesday 6.[6] Start Time: 1001	Wednesday 6.[6] Start Time: ~~1348~~ 1348 10/15/14	Thursday 6.[6] Start Time: 1031	Friday 6.[6] Start Time:	Saturday 6.[6] Start Time:	Sunday 6.[6] Start Time:
TA-54-375 Cell 1							
Calibrated Infrared Thermometer (6.[7])	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.[9])	54.3 °F	56.5 °F	~~60.0~~ 66.0 °F 10/15/14	61.3 °F	°F	°F	°F
Container ID #	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
68685	53.8	56.2	65.9	60.5			
68540	54.0	56.1	65.8	60.3			
68553	54.0	56.1	65.7	60.6			
69445	54.1	56.4	64.1	60.1			
69618	54.1	56.3	64.3	60.4			
69013	54.5	56.0	64.0	60.6			
LASB50522	55.2	56.8	64.0	60.9			
LASB50452	54.8	56.4	64.2	60.1			
LASB50431	54.6	56.9	64.0	60.9			
LASB50069	54.9	56.5	64.2	60.9			
LASB50073	55.1	56.6	64.1	60.8			
69636	55.4	56.7	64.8	60.8			
69616	55.1	56.8	65.4	60.5			
69417	55.4	56.9	65.2	60.4			

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INITIAL EC DATE 10·13·14

ATTACHMENT 3
Page 2 of 3

6.[6] Date: From 10·13·14 to 10·19·14

Container ID #	Monday Temp (°F) (6.[10]/6.[11])	Tuesday Temp (°F) (6.[10]/6.[11])	Wednesday Temp (°F) (6.[10]/6.[11])	Thursday Temp (°F) (6.[10]/6.[11])	Friday Temp (°F) (6.[10]/6.[11])	Saturday Temp (°F) (6.[10]/6.[11])	Sunday Temp (°F) (6.[10]/6.[11])
TA-54-375 Cell 1 (continued)							
69620	55.7	56.9	65.0	60.6			
69520	55.9	57.1	64.6	60.5			
69641	56.2	57.4	64.8	60.7			
69298	56.6	57.4	64.8	60.7			
LASB02203	56.2	57.7	64.7	60.5			
Ambient Temperature (6.[14])	55.4 °F	56.6 °F	65.9 °F	61.8 °F	°F	°F	°F
End Time (6.[15])	1004	1008	1355	1058			
6.[15]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: [signature] Operator: [signature]	Operator: Operator:	Operator: Operator:	Operator: Operator:

6.[2] Comments:

ATTACHMENT 3
Page 3 of 3

6.[6] Date: From 10·13·14 to 10·19·14

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Juan Garcia	Juan Garcia	1169840		10-13-14
Joshua Lopez	Joshua Lopez	116598		10/13/14
THOMAS VIGIL		236382		10/14/14
Joshua Lopez	Joshua Lopez	116598		10/14/14
Alfredo Aguilar		293178		10/15/14
Joshua Lopez	Joshua Lopez	116598		10/15/14
Josephine Duran		157971		10/16/14
Joshua Lopez	Joshua Lopez	116598		10/16/14

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 10·13·14 to 10·19·14

	Monday 6.[6] Start Time: 1006	Tuesday 6.[6] Start Time: 1009	Wednesday 6.[6] Start Time: 1340	Thursday 6.[6] Start Time: 1100	Friday 6.[6] Start Time:	Saturday 6.[6] Start Time:	Sunday 6.[6] Start Time:
TA-54-375 Cell 2							
Calibrated Infrared Thermometer (6.[7])	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.[9])	56.3 °F	57.3 °F	62.9 °F	61.1 °F	°F	°F	°F
Container ID #	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
LASB02198	56.3	57.1	62.9	60.2			
68638	56.0	56.9	63.2	61.6			
69615	56.3	56.9	64.6	61.0			
69635	56.6	57.4	64.5	61.3			
69642	56.0	57.0	64.5	61.5			
69630	56.4	57.2	64.4	61.6			
69633	56.7	57.3	64.0	61.2			
68430	56.0	57.0	63.5	61.1			
68631	~~10-13-14 56.7~~ 55.7	56.7	63.0	61.0			
69634	56.4	57.0	63.5	60.4			
68567	56.2	56.7	62.9	60.3			
94227	55.9	56.9	64.1	60.7			
LASB50442	56.6	57.2	63.5	61.3			
69644	56.6	57.4	63.6	61.3			
LASB50443	56.4	57.2	63.4	61.0			
69638	56.7	57.3	63.8	61.0			

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Z# 114188
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6.[6] Date: From 10·13·14 to 10·19·14

Container ID #	Monday Temp (°F) (6.[10]/6.[11])	Tuesday Temp (°F) (6.[10]/6.[11])	Wednesday Temp (°F) (6.[10]/6.[11])	Thursday Temp (°F) (6.[10]/6.[11])	Friday Temp (°F) (6.[10]/6.[11])	Saturday Temp (°F) (6.[10]/6.[11])	Sunday Temp (°F) (6.[10]/6.[11])
TA-54-375 Cell 2 (continued)							
68624	56.9	57.4	~~69~~ 63.9 (JK 10/15/14)	61.0			
68507	56.8	57.3	63.7	61.3			
69568	56.3	57.0	63.2	61.4			
69553	56.1	57.0	63.0	60.3			
69598	56.4	57.1	63.0	60.5			
LASB50559	56.4	57.2	63.4	61.0			
69015	57.1	57.7	63.6	61.9			
69639	57.5	57.8	63.7	61.6			
69637	57.1	57.7	63.7	61.1			
Ambient Temperature (6.[14])	56.3 °F	57.1 °F	63.4 °F	61.3 °F	°F	°F	°F
End Time (6.[15])	1014	1016	1346	1116			
6.[15]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: Operator:	Operator: Operator:	Operator: Operator:

6.[2] Comments:

ATTACHMENT 4
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6.[6] Date: From 10·13·14 to 10·19·14

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Juan Garcia	Juan Garcia	169840	10-13-14	10-13-14
Joshua Lopez	Joshua Lopez	116598	JN	10/13/14
Thomas Vigil	[illegible]	236382	TV	10/14/14
Joshua Lopez	Joshua Lopez	116598	JN	10/14/14
Alfredo Aguilar	[illegible]	293178	AA	10/15/14
Joshua Lopez	Joshua Lopez	116598	JL	10/15/14
Josephine Duran	[illegible]	151971	JD	10/20/14
Joshua Lopez	Joshua Lopez	116598	JN	10/16/14

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date

ATTACHMENT 5
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TA-54 AREA G TA-54-375 CELL 3 NITRATE SALT TRU WASTE CONTAINER DAILY TEMPERATURE DATA SHEET

6.[6] Date: From 10·13·14 to 10·19·14

	Monday 6.[6] Start Time: 0948	Tuesday 6.[6] Start Time: 0955	Wednesday 6.[6] Start Time: 1334	Thursday 6.[6] Start Time: 1012	Friday 6.[6] Start Time:	Saturday 6.[6] Start Time:	Sunday 6.[6] Start Time:
TA-54-375 Cell 3							
Calibrated Infrared Thermometer (6.[7])	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.[9])	56.0 °F	57.2 °F	64.0 °F	60.4 °F	°F	°F	°F
Container ID #	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
69519	56.2	57.5	63.9	60.3			
69645	56.4	57.7	63.8	60.9			
94068	56.8	57.9	63.7	61.0			
93605	56.5	57.3	64.1	61.1			
69548	56.4	57.3	64.3	61.1			
69604	56.4	57.6	64.1	60.5			
LASB50529	56.6	57.6	64.0	60.7			
LASB50418	56.4	57.3	64.0	~~60~~ 61.0			
69036	56.3	57.1	64.2	60.8			
LASB50451	56.1	57.2	64.0	~~60~~ 61.5			
69559	56.3	57.2	64.2	60.9			
LASB50448	56.3	57.0	64.1	60.8			
Ambient Temperature (6.[14])	56.2 °F	57.1 °F	64.6 °F	60.5 °F	°F	°F	°F
End Time (6.[15])	0954	0958	1338	1029			
6.[15]	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:	Operator: Operator:

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INITIAL EC DATE 10·13·14

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6.[6] Date: From 10·13·14 to 10·19·14

6.[2] Comments:

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Juan Garcia	Juan Garcia	169840	JG	10-13-14
Joshua Lopez	Joshua Lopez	116598	JL	10/13/14
Thomas Vigil	Thomas Vigil	238382	TV	10/14/14
Joshua Lopez	Joshua Lopez	116598	JL	10/14/14
Alfredo Aguilar	Alfredo Aguilar	293188	AA	10/15/14
Joshua Lopez	Joshua Lopez	116598	JL	10/15/14
Josephine Jaramillo	Josephine Jaramillo	157971	JJ	10/16/14
Joshua Lopez	Joshua Lopez	116598	JL	10/16/14

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date

ATTACHMENT 6
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TA-54 AREA G NITRATE SALT TRU WASTE CONTAINER HOURLY TEMPERATURE DATA SHEET

6.[6] Date: From 10-16-14 to 10-16-14 Location: 375

	Start Time: 6.[6] 0628	Start Time: 6.[6] 0727	Start Time: 6.[6] 0829	Start Time: 6.[6] 0927	Start Time: 6.[6] 1025	Start Time: 6.[6] 1123	Start Time: 6.[6] 1228	Start Time: 6.[6] 1327	Start Time: 6.[6] 1425	Start Time: 6.[6] 1528	Start Time: 6.[6] 1626	Start Time: 6.[6] 1726	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer (6.[7])	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.[9])	53.15 °F	52.86 °F	53.05 °F	55.71 °F	59.12 °F	62.07 °F	62.67 °F	64.25 °F	65.35 °F	66.17 °F	66.36 °F	65.32 °F	°F	°F
Container ID # (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
68685T1	53.26	52.91	53.14	55.78	58.76	61.51	63.11	64.84	66.42	67.34	67.42	66.28		
68685T2	53.	52.64	52.93	55.55	58.39	60.88	62.41	63.92	64.99	65.87	66.18	65.58		
50522T4	54.23	53.96	54.04	55.93	58.27	60.29	61.12	62.12	63.21	63.82	64.05	63.43		
50522T5	54.17	53.92	54.09	56.09	58.39	60.36	61.26	62.27	63.3	63.89	64.17	63.66		

N/A

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INITIAL Sam DATE 10-16-14

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6.[6] Date: From 10-16-14 to 10-16-14 Location: 375

Container ID # (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
Ambient Temperature (6.[14])	53.17 °F	52.81 °F	53.05 °F	55.71	59.29	62.1 °F	62.78	64.28	65.49	66.17 °F	66.36	65.32	°F	°F
End Time (6.[15])	0631	0728	0830	0928	1026	1123	1229	1328	1426	1529	1626	1727		
6.[15]	Operator: DA Operator:	Operator: DA Operator:	Operator: DA Operator:	Operator: DA Operator:	Operator: DA Operator:	Operator: DA Operator:	Operator: DA Operator:	Operator: DA Operator:	Operator: DA Operator:	Operator: Operator:	Operator: DA Operator:	Operator: DA Operator:	Operator: Operator:	Operator: Operator:

N/A

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6.[6] Date: From 10-16-14 to 10-16-14 Location: 325

6.[2] Comments: No Entry into Permacon Due to Standing Order Area G-1280 R.O - Hourly Reading Taken Data Logger Computer.

No Further Comments

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Tina Aguirre	Tina Aguirre	1141	TA	10-16-14
Jose Chavez		1214378	JC	10-16-14
William Wave		2014581	WJ	10-16-14
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/

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

8.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
Pat O'Grady	Pat O'Grady	1151358	JPO	10-16-14

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

6.[6] Date: From 10-16-14 to 10-17-14 Location: 375

	Start Time: 6.[6] 1827	Start Time: 6.[6] 1929	Start Time: 6.[6] 2031	Start Time: 6.[6] 2128	Start Time: 6.[6] 2230	Start Time: 6.[6] 2331	Start Time: 6.[6] 0028	Start Time: 6.[6] 0130	Start Time: 6.[6] 0229	Start Time: 6.[6] 0331	Start Time: 6.[6] 0428	Start Time: 6.[6] 0530	~~Start Time: 6.[6]~~	Start Time: 6.[6]
Calibrated Infrared Thermometer (6.[7])	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	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	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	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[9])	63.12	59.77 °F	59.56 °F	59.24 °F	59.91 °F	58.40 °F	58.31 °F	57.94 °F	56.37 °F	55.81 °F	55.45 °F	54.91 °F	°F	°F
Container ID # (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
68685 T1	63.91	60.45	60.02	59.43	58.12	57.99	57.93	57.42	56.33	55.76	55.38	54.86		
68685 T2	63.97	60.22	59.71	59.36	58.08	57.65	57.56	57.27	56.84	55.69	55.06	54.57		
50522 T4	62.12	59.78	59.59	59.39	59.23	58.18	58.12	57.73	57.05	56.7	56.09	55.73		
50522 T5	62.31	59.98	59.61	59.29	59.01	58.1	58.05	57.79	56.96	56.63	56.02	55.62		

N/A

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6.[6] Date: From 10-16-14 to 10-17-14 Location: 375

Container ID # (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])	Temp (°F) (6.[10]/6.[11])
							NA							
Ambient Temperature (6.[14])	63.08 °F	59.77 °F	59.56 °F	59.24 °F	58.89 °F	58.33 °F	58.31 °F	57.84 °F	56.37 °F	55.81 °F	55.45 °F	54.91 °F	°F	°F
End Time (6.[15])	1829	1930	2032	2129	2231	2332	0029	0131	0230	0332	0429	0531		
6.[15]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: [illegible] Operator: [illegible]	Operator: NA Operator:	Operator: Operator:

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6.[6] Date: From 10-16-14 to 10-17-14 Location: 375

6.[2] Comments: N/C

6.[19] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Tina Aguirre	Tina Aguirre	1211		10-16-14
Waylon P. Mowrey	Waylon P. Mowrey	219908	WM	10-16-14
Rick Nastos	Rick Nastos	163266		101714
Sammy Barck	Sammy Barck	114471		10-17-14
	NA			