From: Juarez, Catherine L
Sent: Tuesday, May 05, 2015 4:15 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; Alexander, Rick A; Baumer, Andy; Martinez, Saundra; Sauer, Selena Z; Schreiber, Arleen Thorn; Maestas, Pamela Therese; Hargis, Kenneth Marshall; Cabbil, Cheryl Denise; Young, Steven L; Erickson, Randy; Funk, David John; Alexander, Rick A; Frederici, Dave; Robinson, Bruce Alan; Lansing, Michael Alan; Tymkowych, John M; Branch, Yvette S; Guffee, Debi; Armijo, Karen (CONTR); Saladen, Michael Thomas; epccat@lanl.gov; Vigil-Holterman, Luciana R; Juarez, Catherine L; Diaz, Tammy; Haagenstad, Mark P; Leibman, Chris
Subject: Daily Technical Submission - May 5, 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 and April 27, 2015 letters from NMED regarding *Modification to May 19, 2014, Administrative Order*; and Section IX of the April 21, 2015, *LANL Nitrate Salt-Bearing Waste Container Isolation Plan, Revision 3*.

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

May 5, 2015

Participants:

- New Mexico Environment Department: Tim Hall, Siona Briley and Coleman Smith.
- LANL – NNSA- Los Alamos Field Office:
- Environmental Management- Los Alamos Field Office (EM-LA): Carolyn Bateman.
- LANL – Los Alamos National Security: Alison Dorries, Don Allen, Chris Leibman, Mark Haagenstad, John Tymkowych, Luciana Vigil-Holterman and Cathy Juarez.

LANL Technical Update:

- **Location of Nitrate Salt-Bearing Wastes**
  - Remediated nitrate salt-bearing waste containers (55 SWBs and 4 POCs).
    - All containers remain in 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.
      - May 5, 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 May, LANL has conducted HSG sampling on 27 containers.

- **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 other SWB overpacks (containing 55-gallon drums of remediated nitrate salt-bearing waste) and four nitrate salt-bearing waste POCs.
      - 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:

- The NMED-HWB requested information on the solid phase micro-extraction technique. The following was discussed in the telecon May 5, 2015:
    - Solid Phase Microextraction (SPME) samples were collected on fibers purchased from SUPELCO, Bellefonte, PA. The composite SPME fiber assembly was 1 cm in length and comprised of 50/30 µm divinyl benzene/carboxen/polydimethylsiloxane (DVB/CAR/PDMS). The fiber was extended into the gas sample for an ~ 15 minute exposure period. The SPME fiber was then analyzed using gas chromatography/mass spectrometry for qualitative identification of volatile organic compounds.
- The Permittees will be prepared to discuss current progress on additional air conditioning to be added to the Dome 375 Permacon on Tuesday, May 12, 2015. Changes to the LANL Isolation Plan associated with this upgrade will also be discussed.
- The NMED-HWB would like additional information on full-scale drum testing currently underway, and request that a meeting be held to discuss results if a report will not be available for public distribution.
- The Permittees confirmed that to date, no moisture content measurements have been collected and NMED-HWB would like additional information about the potential for drying within the waste containers.

Next Call: Thursday, May 7, 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

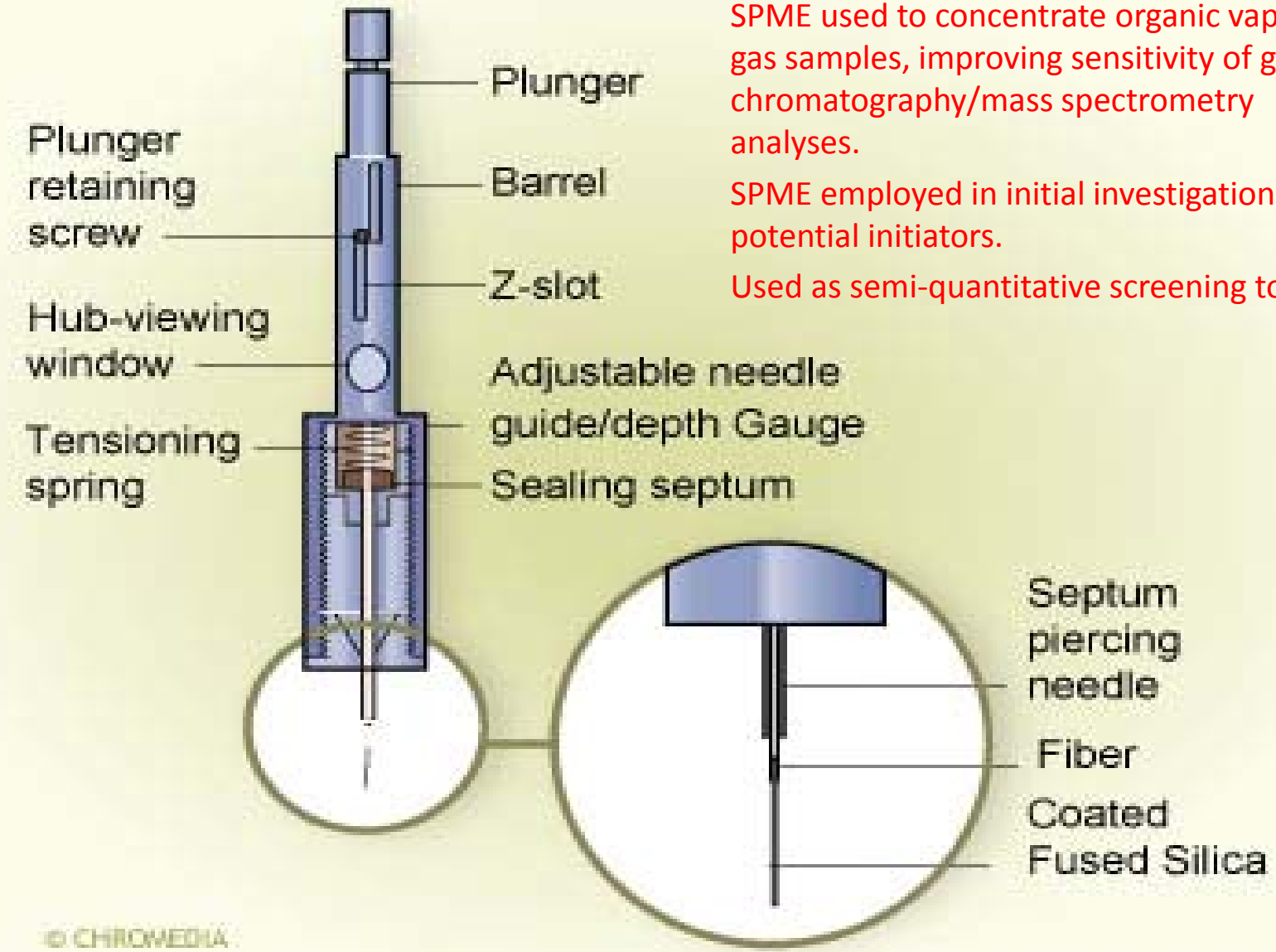
	Requested Information	Actionee	Status	Completion Date
36.	NMED request regarding LANL Causal Analysis associated with processing of nitrate salt-bearing waste at WCRRF – when document is Final.	LANL	Document is currently Draft.	
37.	NMED requested a diagram illustrating the current locations within the 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	---	Complete. Email – February 17, 2015. Letter- March 19, 2015.
51.	NMED requested copies of any procedures regarding cementation in bags.	LANL	---	March 19, 2015 Confirmation that no specific procedure can be located for cementation in bags.
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	---	Complete. Discussed during technical meeting on April 16, 2015. Email follow-up on April 20, 2015.
53.	NMED requested the document “TA-55 Cement Fixation Drum Logbook” referenced in the CCP AK document.	LANL	---	Complete. Included with April 24, 2015 Response to Request for Information.
54.	NMED requested summary sheet for HSG data.	LANL	---	Complete April 9, 2015.

	Requested Information	Actionee	Status	Completion Date
55.	NMED requested additional discussion on engineering options for cooling in Summer months.	LANL	---	Complete. Discussed during technical meeting on April 16, 2015.
56.	NMED requested references in Technical Assessment Team report Waste Isolation Pilot Plant (WIPP): Chemical Reactivity and Recommended Remediation Strategy for Los Alamos Remediated Nitrate Salt (RNS) Wastes.	LANL	---	Complete April 9, 2015.
57.	Schedule an eighth LANL update meeting to continue technical discussions associated with remediation options, planning and other topics of interest.	LANL/ NMED	---	Complete April 16, 2015.

Solid Phase Microextraction (SPME) Sampling Device

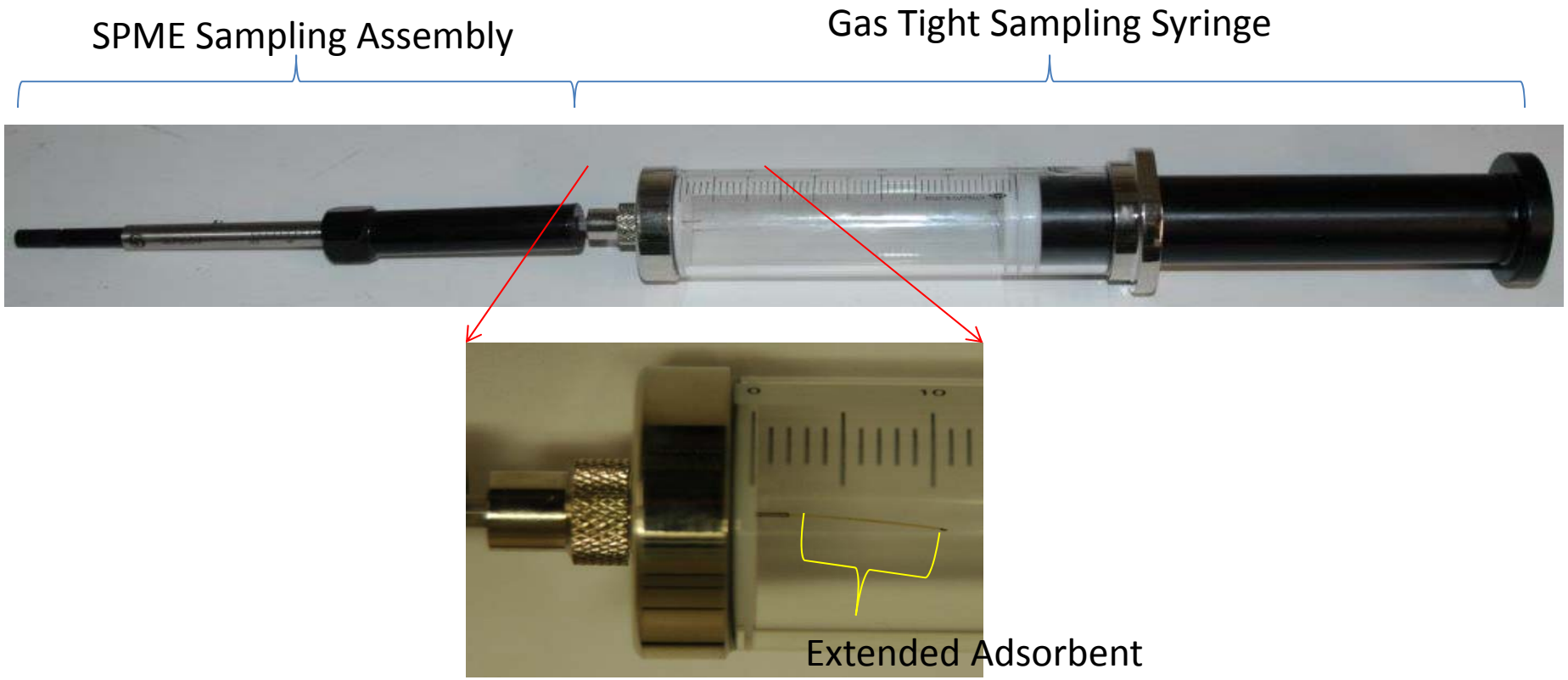


SPME used to concentrate organic vapors in gas samples, improving sensitivity of gas chromatography/mass spectrometry analyses.

SPME employed in initial investigations to ID potential initiators.

Used as semi-quantitative screening tool.

SPME Sampling Assembly



- Solid Phase Microextraction (SPME) samples are collected from 40 mls of gas remaining after 10 mls used for permanent gas analysis.
- Fiber Exposed for ~ 15 minutes.

Remediated Nitrate Salt Container Headspace Gas Analysis

	68685				SB50522				69298			
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**
05/05/15	121	343	8580	1971	2427	440	35051	1048	604	645	8692	1145

Remediated Nitrate Salt Container Headspace Gas Analysis

	69630				69636				69642			
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**
05/05/15	391	588	9885	698	67	203	4625	394	68	91	2048	159

Remediated Nitrate Salt Container Headspace Gas Analysis

	SB02203				SB50073				SB50431			
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**
05/05/15	120	105	2018	59	879	963	8097	2255	659	402	6746	975

Remediated Nitrate Salt Container Headspace Gas Analysis

	SB50443			
Date	**H_2 ppm**	**CO ppm**	**CO_2 ppm**	**N_2O ppm**
05/05/15	501	638	8406	1437

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 5·4·15 to 5·10·15

	Monday 6.[6] Start Time: 0913	Tuesday 6.[6] Start Time:	Wednesday 6.[6] Start Time:	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 7295 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	Brand: Model: Cal. Due Date: File Number	Brand: Model: Cal. Due Date: File Number
Ambient Temperature (6.[7])	58.4 °F	°F	°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	57.2						
S802833	56.8						
S801676	57.1						
S816810	55.8						
70069	55.4						
S822844	57.4						
S825879	55.7						
S793724	55.8						
S813545	56.2						
S822713	56.9						
S802739	57.0						
69907	56.9						
S804995	57.1						
S816434	58.2						

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INITIAL EC DATE 5·4·15

ATTACHMENT 2
Page 2 of 3

6.[6] Date: From 5-4-15 to 5-10-15

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-54-231 (continued)							
S805289	57.8						
S862888	57.1						
70072	57.0						
S823184	~~57.1~~ 57.1						
S822599	57.1						
69904	56.3						
S805051	56.0						
S864213	55.9						
S853714	55.7						
S803078	55.6						
S825878	59.9						
S823124	~~56.2~~ 56.2						
S804948	57.5						
S813385	57.4						
S842446	58.6						
Ambient Temperature (6.[13])	58.7 °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F	_____ °F
End Time (6.[14])	0922	_____	_____	_____	_____	_____	_____
6.[14]	Operator: DA Operator: _____	Operator: _____ Operator: _____	Operator: _____ Operator: _____	Operator: _____ Operator: _____	Operator: _____ Operator: _____	Operator: _____ Operator: _____	Operator: _____ Operator: _____

ATTACHMENT 2
Page 3 of 3

6.[6] Date: From 5.4.15 to 5.10.15

6.[2] Comments: _____

6.[18] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Tina Aguirre	Tina Aguirre	174977	Dt	050415
Leon Montoya		191526	LM	5/4/15
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/
	/	/	/	/

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

9.1[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 5·4·15 to 5·10·15

	Monday 6.[6] Start Time: 0942	Tuesday 6.[6] Start Time:	Wednesday 6.[6] Start Time:	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: 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.[7])	56.5 °F	°F	°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	56.7						
LA00000070503 68540	56.5						
LA00000070503 68553	56.6						
69445	57.3						
69618	56.4						
69013	57.0						
LASB50522	57.6						
LASB50452	57.3						
LASB50431	~~57.3~~ 57.3						
LASB50069	57.4						
LASB50073	57.3						
69636	57.3						
69616	57.2						
69417	57.3						

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Z# 114188
INITIAL EC DATE 5·4·15

ATTACHMENT 3
Page 2 of 3

6.[6] Date: From 5·4·15 to 5·10·15

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	57.4						
69520	57.5						
69641	57.7						
69298	58.0						
LASB02203	57.6						
Ambient Temperature (6.[13])	56.7 °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
End Time (6.[14])	0845						
6.[14]	Operator: QA Operator:	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

6.[2] Comments:

ATTACHMENT 4

6.[6] Date: From 5·4·15 to 5·10·15

6.[18] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Tina Aguirre	Tina Aguirre	[illegible]	[illegible]	050415
Leon Montoya	[signature]	119521	[illegible]	5/4/15

Operator (print)	Signature	Z#	Initials	Date

9.1[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 5-4-15 to 5-10-15

	Monday 6.[6] Start Time: 0846	Tuesday 6.[6] Start Time: ____	Wednesday 6.[6] Start Time: ____	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: ____ 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.[7])	57.7 °F	____ °F	____ °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	57.5						
68638	57.6						
69615	57.5						
69635	58.7						
69642	57.8						
69630	57.8						
69633	58.1						
68430	57.8						
68631	57.6						
69634	57.9						
68567	57.6						
94227	~~58.3~~ 57.9						
LASB50442	58.3						
69644	58.1						
LASB50443	58.0						
69638	58.2						

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6.[6] Date: From 5-4-15 to 5-10-15

Container ID #	Monday Temp (°F) (6.[8]/6.[9])	Tuesday Temp (°F) (6.[8]/6.[9])	Wednesday Temp (°F) (6.[8]/6.[9])	Thursday Temp (°F) (6.[8]/6.[9])	Friday Temp (°F) (6.[8]/6.[9])	Saturday Temp (°F) (6.[8]/6.[9])	Sunday Temp (°F) (6.[8]/6.[9])
TA-54-375 Cell 2 (continued)							
68624	58.2						
68507	58.3						
69568	57.8						
69553	57.7						
69598	58.0						
LASB50559	58.4						
69015	58.4						
69639	58.2						
69637	58.0						
Ambient Temperature (6.[13])	57.8 °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
End Time (6.[14])	0850						
6.[14]	Operator: CA Operator: LM	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

6.[2] Comments:

ATTACHMENT 3

6.[6] Date: From 5·4·15 to 5·10·15

6.[18] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Tina Aguirre	[signature]	[illegible]	TA	050415
Leon Montoya	[signature]	V1152 61	Lm	5/4/15

Operator (print)	Signature	Z#	Initials	Date

9.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date

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

6.[6] Date: From 5·4·15 to 5·10·15

	Monday 6.[6] Start Time: 0836	Tuesday 6.[6] Start Time:	Wednesday 6.[6] Start Time:	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: 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.[7])	59.1 °F	°F	°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	58.3						
69645	58.6						
94068	58.9						
93605	57.0						
69548	58.7						
69604	58.9						
LASB50529	58.9						
LASB50418	58.4						
69036	58.0						
LASB50451	58.6						
69559	58.7						
LASB50448	59.6						
87823	58.6						
87825	58.3						
87826	59.1						
87827	59.0						

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6.[6] Date: From 5-4-15 to 5-10-15

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 3 (continued)							
Ambient Temperature (6.[13])	58.6 °F	____ °F	____ °F	____ °F	____ °F	____ °F	____ °F
End Time (6.[14])	0948						
6.[14]	Operator: [signature] Operator: [signature]	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____	Operator: ____ Operator: ____

6.[2] Comments:

ATTACHMENT 5

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6.[18] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Tina Aguirre	[signature]	149277	AA	050415
Leon Montoya	[signature]	119526	Lm	5/4/15

Operator (print)	Signature	Z#	Initials	Date

9.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date

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

6.[6] Date: From 5/4/15 to 5/4/15 Location: 375

	Start Time: 6.[6] 0647	Start Time: 6.[6] 0727	Start Time: 6.[6] 0832	Start Time: 6.[6] 0932	Start Time: 6.[6] 1032	Start Time: 6.[6] 1129	Start Time: 6.[6] 1224	Start Time: 6.[6] 1324	Start Time: 6.[6] 1424	Start Time: 6.[6] 1528	Start Time: 6.[6] 1623	Start Time: 6.[6] 1721	Start Time: 6.[6]	Start Time: 6.[6]
Calibrated Infrared Thermometer (4.2.1[1][B])	Brand / Model: A / Cal. Due Date / File Number	Brand / Model: A / Cal. Due Date / File Number	Brand / Model: A / Cal. Due Date / File Number	Brand / Model: A / Cal. Due Date / File Number	Brand / Model: A / Cal. Due Date / File Number	Brand / Model: A / Cal. Due Date / File Number	Brand / Model: A / Cal. Due Date / File Number	Brand / Model: A / Cal. Due Date / File Number	Brand / Model: A / Cal. Due Date / File Number	Brand / Model: A / Cal. Due Date / File Number	Brand / Model: A / Cal. Due Date / File Number	Brand / Model: A / Cal. Due Date / File Number	Brand / Model / Cal. Due Date / File Number	Brand / Model / Cal. Due Date / File Number
Ambient Temperature (6.[7])	57.77 °F	54.40	55.34 °F	57.17	60.32 °F	62.80	63.78 °F	65.22	62.78	61.09 °F	61.84 °F	60.61 °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])
1 64685	57.97	54.57	55.55	57.28	60.16	62.77	65.01	66.54	63.55	61.65	62.43	60.41		
2 68685	57.50	54.16	55.28	56.94	59.69	62.01	63.32	64.88	62.94	61.30	62.11	60.34		
4 50522	~~57.70~~	55.41	56.08	57.29	59.42	61.14	62.10	63.32	61.93	60.22	60.79	59.76		
5 50522	55.57	55.29	56.12	57.41	59.56	61.35	62.13	63.31	62.02	60.45	61.02	59.92		

N/A

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6 [6] Date: From 5/4/15 to 5/4/15 Location: 375

Container ID # (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])	Temp (°F) (6 [8]/6 [9])
						N/A								N/A	
Ambient Temperature (6 [13])	57.79 °F	54.37 ~~0912~~ °F AM 5/4/15	55.41 °F	57.17 °F	60.32 °F	62.73	63.77 °F	65.17	62.20	61.09 °F	61.84 °F	59.95 °F	____ °F	____ °F	
End Time (6 [14])	0644	0728	0827	0933	1033	1124	1225	1325	1424	1529	1624	1722	____	____	
6 [14]	Operator: bm / Operator: QA	Operator: QA / Operator: bm	Operator: bm / Operator: QA	Operator: QA / Operator: bm	Operator: bm / Operator: QA	Operator: QA / Operator: [illegible]	Operator: [illegible] / Operator: QA	Operator: QA / Operator: bm	Operator: QA / Operator: bm	Operator: bm / Operator: QA	Operator: QA / Operator: bm	Operator: QA / Operator: bm	Operator: ____ / Operator: ____	Operator: ____ / Operator: ____	

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6.[6] Date: From 5/4/15 to 5/7/15 Location: 375

6.[2] Comments: N/A

6.[18] Performed by:

Operator (print)	Signature	Z#	Initials	Date
Ana Aguirre	[signature]	[illegible]	[initials]	05050415
Leon Montoya	[signature]	119326	[initials]	5/4/15
N/A				

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

9.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date

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

6.[6] Date: From 5-4-15 to 5-5-15 Location: Dome 375

	Start Time: 6.[6] 1827	Start Time: 6.[6] 1927	Start Time: 6.[6] 2028	Start Time: 6.[6] 2128	Start Time: 6.[6] 2227	Start Time: 6.[6] 2326	Start Time: 6.[6] 0030	Start Time: 6.[6] 0127	Start Time: 6.[6] 0225	Start Time: 6.[6] 0327	Start Time: 6.[6] 0426	Start Time: 6.[6] 0529	Start Time: 6.[6] ~	Start Time: A 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])	60.52 °F	59.85 °F	58.47 °F	57.69 °F	57.18 °F	56.69 °F	56.25 °F	55.89 °F	55.68 °F	55.09 °F	54.25 °F	53.83 °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])
T(1) 68685	60.53	59.52	58.23	57.44	57.00	56.56	56.24	55.88	55.70	55.16	54.37	53.98		
T(2) 68685	60.01	59.05	57.73	57.02	56.59	56.16	55.81	55.51	55.34	54.73	53.92	53.60		
T(4) 50522	59.95	59.38	58.41	57.77	57.41	57.06	56.75	56.50	56.33	55.88	55.32	54.94		
T(5) 50522	59.99	59.26	58.19	57.64	57.26	56.96	56.63	56.39	56.24	55.76	55.12	54.86		
						N/A								

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6.[6] Date: From 5-4-15 to 5-5-15 Location: Dome 375

Container ID # (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])	Temp (°F) (6.[8]/6.[9])
							n/A								
Ambient Temperature (6.[13])	60.52 °F	59.85 °F	58.47 °F	57.71 °F	57.15 °F	56.69 °F	56.25 °F	55.89 °F	55.68 °F	55.06 °F	54.19 °F	53.83 °F	____ °F	____ °F	
End Time (6.[14])	1827	1927	2028	2128	2228	2327	0030	0127	0225	0328	0427	0529			
6.[14]	Operator: WJC Operator: GE	Operator: WJC Operator: GE	Operator: WJC Operator: GE	Operator: GE Operator: WJC	Operator: GE Operator: WJC	Operator: GE Operator: WJC	Operator: WJC Operator: GE	Operator: WJC Operator: GE	Operator: WJC Operator: GE	Operator: GE Operator: WJC	Operator: GE Operator: WJC	Operator: GE Operator: WJC	Operator: ____ Operator: ____	Operator: ____ Operator: ____	

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6.[6] Date: From 5-4-15 to 5-5-15 Location: Dom 375

6.[2] Comments:

10 entries 5-5-15 [illegible] 112807

6.[18] Performed by:

Operator (print)	Signature	Z#	Initials	Date
William J. Cook	[signature]	112807	WJC	5-4-15
Gerald Espinoza	[signature]	120574	GE	050415

N/A

Operator (print)	Signature	Z#	Initials	Date

N/A

9.1[2] Reviewed by:

SOM or designee (print)	Signature	Z#	Initials	Date
Elena J. Gonzales	[signature]	114188	EG	5.5.15