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Sent: Thursday, September 04, 2014 6:35 PM

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Subject: Daily Technical Submission - September 4, 2014

Attached is the written daily technical submission for today. The Permittees are submitting this 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 VIII of the May 29, 2014, *Revised LANL Nitrate Salt-Bearing Waste Container Isolation Plan*.

If you have any revisions, please let me know.

Thank you

Tori George

Program Director

Los Alamos National Laboratory

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NMED / LANL Technical Summary

September 4, 2014

Participation:

- New Mexico Environment Department: Siona Briley, Ricardo Maestas, Coleman Smith, Steve Holmes, Leslie Dale.
- LANL – Los Alamos National Security: Kiki Torres, Tori George, Don Allen, Mark Haagenstad

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.
- **Monitoring – Visual Inspections**
 - No abnormal conditions.
- **Additional measures currently underway**
 - As a conservative measure, LANL is currently conducting additional monitoring. This additional monitoring includes:
 - Container (SWB) 68685.
 - Continue daily head space gas (HSG) sample collection.
 - September 2-4, 2014 HSG data attached
 - H₂, CO, CO₂ and N₂O
 - LANL also continuing *solid phase micro-extraction*.
 - Hourly temperature measurements.
 - Temperatures remain below 90°F.
 - Container (SWB) SB50522.
 - Continue daily HSG sample collection.
 - September 2-4, 2014 HSG data attached
 - H₂, CO, CO₂ and N₂O
 - LANL also continuing *solid phase micro-extraction*.
 - Hourly temperature measurements.
 - Temperatures remain below 90°F.

- Five (5) other SWB overpacks (containing 55-gallon drums of remediated nitrate salt-bearing waste).
 - Continue bi-weekly HSG sample collection.
 - September 2 & 4, 2014 HSG data attached.
 - H₂, CO, CO₂ and N₂O
 - LANL has conducted HSG sampling on each of the 55 SWBs that contain 55-gallon drums of remediated nitrate salt-bearing waste.
- **Anticipated Changes to Nitrate Salt-Bearing Waste Containers (e.g. movement, re-packaging).**
 - Currently, no further movements or re-packaging are planned.

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
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	Unremediated Parent In progress –	Empty Parent Complete June 16, 2014 August 14, 2014 (Supplemental information discussed on sampling of parent containers) August 26, 2014 (Letter on applicability of LANL HWFP for opening waste containers)
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 sent 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)
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	---	Information will be included in LANL response to NMED’s August 26, 2014 letter.
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)
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 <i>Response to Request for Information on Management of Waste at LANL</i> .	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 (3 rd 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	In progress	
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	In progress	
35.	Schedule a third update on LANL efforts – including teams.	LANL / NMED	In progress	

Next Call: Tuesday, September 9, 2014.

Remediated Nitrate Salt Container Headspace Gas Analysis

Date	68685				69553				69615				69616				5850069				5850452				5850522			
	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm	H ₂ ppm	CO ppm	CO ₂ ppm	N ₂ O ppm
09/02/14	96	1013	21716	6918	146	711	23055	3428	114	355	10853	555	246	1275	36423	8257	364	1048	25820	4435	548	1012	25803	5199	7373	362	53304	859
09/03/14	88	677	15348	4857																					6986	259	39338	693
09/04/14	126	1120	27887	8802	125	519	21770	3307	106	428	10414	511	235	1200	33958	7707	484	1391	33346	5901	499	1021	25752	5240	7911	500	57002	924