

**STATE OF NEW MEXICO
ENVIRONMENT DEPARTMENT**

ENVIRONMENTAL HEALTH DIVISION,)	
HAZARDOUS WASTE BUREAU,)	
)	COMPLIANCE ORDER
Complainant,)	NO. HWB-14-20 (CO)
)	
v.)	
)	
UNITED STATES DEPARTMENT)	
OF ENERGY, and)	
LOS ALAMOS NATIONAL SECURITY, LLC,)	
)	
Respondents.)	
)	
LOS ALAMOS NATIONAL LABORATORY)	
<u>LOS ALAMOS COUNTY, NEW MEXICO</u>)	

SETTLEMENT AGREEMENT AND STIPULATED FINAL ORDER

This Settlement Agreement and Stipulated Final Order (“Settlement Agreement”) is entered into between the Hazardous Waste Bureau (“HWB”) of the Resource Protection Division (“Division”) of the New Mexico Environment Department (“NMED”), and the United States Department of Energy (“DOE”) and Los Alamos National Security, LLC (“LANS”) (collectively, the “Respondents”) for the purpose of resolving Compliance Order No. HWB-14-20, issued to the Respondents on December 6, 2014 (“LANL Order”), related to the Los Alamos National Laboratory (“LANL”). Pursuant to 20.1.5.600(B)(2) NMAC, NMED and the Respondents (collectively “Parties”) enter into this Settlement Agreement to resolve alleged violations of the New Mexico Hazardous Waste Act (“HWA”), NMSA 1978, Sections 74-4-1 to -14, the Hazardous Waste Management Regulations, 20.4.1 NMAC, (“HWMR”), and Facility Permit EPA I.D. NUMBER NM0890010515-TSDF (“LANL Permit”), as identified in the LANL Order.

I. BACKGROUND

A. PARTIES

1. Pursuant to the Department of Environment Act, NMSA 1978, Sections 9-7A-1 to -15, NMED is an agency of the executive branch of the State of New Mexico (“State”). NMED, through the HWB, is charged with administration and enforcement of the HWA, the HWMR and correlated Permits, including assessing civil penalties for violations thereof.

2. The U.S. Environmental Protection Agency has granted NMED authority to implement the Resource Conservation and Recovery Act (“RCRA”), 42 U.S.C. § 6901 to 6992k, within New Mexico. The HWMR incorporate portions of 40 C.F.R. § 260 to 40 C.F.R. § 270, 40 C.F.R. § 273, 40 C.F.R. § 279 and related federal regulations by reference.

3. The Respondents are each defined as a “person” within the meaning of Section 74-4-3(M) of the HWA.

4. The Respondents are engaged in the management, storage and treatment of hazardous waste at LANL, including transuranic (“TRU”) mixed waste. Hazardous waste management and the hazardous waste component of TRU mixed waste are subject to RCRA.

5. DOE is a federal agency; LANS is a limited liability company conducting business in New Mexico.

6. DOE is the owner of LANL, and the Respondents are collectively the co-operators of LANL, which requires a permit under 20.4.1.900 NMAC (incorporating 40 C.F.R § 270.1(a)). LANS is co-operator of LANL pursuant to a contract with DOE that became effective on June 1, 2006.

7. LANL is a permitted hazardous waste treatment and storage facility, operating under the LANL Permit first issued by NMED on November 8, 1989, and renewed on November 30, 2010. DOE and LANS are Co-Permittees under the LANL Permit.

B. HISTORY

8. On February 14, 2014, at approximately 11:14 PM, there was an incident in the underground repository at the DOE-owned Waste Isolation Pilot Plant (“WIPP”), which resulted in the release of americium and plutonium from a TRU mixed waste container (drum number 68660) into the environment. It was eventually determined that drum 68660 originated at LANL.

9. After the February 14, 2014 incident, NMED opened an investigation into potential violations of the LANL Permit, the HWA and the HWMR, which included a review and analysis of federal investigatory reports, RCRA information requests and self-disclosures by the Respondents.

10. Based upon the results of its investigation, NMED issued the LANL Order to the Respondents on December 6, 2014 for alleged violations of the LANL Permit, the HWA and the HWMR.

11. After a request for a one week extension of the filing deadline, DOE and LANS filed separate Answers and Requests for Hearing on January 9, 2015.

12. The Parties met in an attempt to reach a mutual settlement of NMED’s claims relating to the violations alleged in the LANL Order.

13. The Parties executed a document entitled *General Principles of Agreement HWB-14-20 and HWB-14-21* on April 30, 2015 (“POA”).

C. ALLEGED VIOLATIONS

14. NMED alleged the following violations in the LANL Order.
15. The Respondents failed to obtain a permit to treat hazardous wastes in violation of 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.1(c), when Respondents neutralized liquid from 232 containers that had multiple EPA Hazardous Waste Numbers.
16. The Respondents failed to obtain a permit to treat hazardous wastes, in violation of 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.1(c), when Respondents failed to add absorbent to hazardous waste at the time the waste was first placed into 672 containers.
17. The Respondents treated hazardous waste in a storage unit not authorized by the Permit for treatment, in violation of 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.1(c).
18. The Respondents failed to confine waste treatment to only those units which DOE and LANS had proposed as treatment units in their Permit Application, in violation of Permit Condition 2.2.
19. The Respondents failed to submit a permit modification request to treat waste at TA-50-69, in violation of 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.42.
20. The Respondents failed to notify NMED in writing within thirty (30) days of discovery of the deviation from the information contained in the Permit Application which caused Respondents to be out of compliance with the Permit, in violation of Permit Condition 1.5.
21. The Respondents failed to notify NMED that they did not submit relevant facts in their Permit Application or had submitted incorrect information in their Permit Application, in violation of Permit Condition 1.9.15.
22. The Respondents failed to provide NMED advanced written notice that they were going to treat hazardous waste at TA-50-69, in violation of Permit Condition 1.9.11.

23. The Respondents failed to provide NMED an opportunity to inspect a modified unit to ensure DOE and LANS complied with the Permit, in violation of Permit Condition 1.9.21.
24. The Respondents accepted waste streams for storage and treatment at permitted units at the Facility that were not fully characterized in violation of Permit Condition 2.4.1.
25. The Respondents failed to ensure that initial characterization of waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 was reviewed or repeated to verify that the characterization was accurate and updated, in violation of Permit Condition 2.4.7.
26. The Respondents failed to annually reevaluate waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 to verify the accuracy of initial and subsequent characterization results, in violation of Permit Condition 2.4.7(1).
27. The Respondents failed to reevaluate waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 to assess the accuracy of the initial waste characterization regarding EPA HWN assignments, in violation of Permit Condition 2.4.7(2).
28. The Respondents failed to perform reevaluation of initial characterization information and annual verification of waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001, in violation of Permit Attachment C, Condition C.3.
29. The Respondents mixed incompatible wastes (nitrate salts) and organic materials (organic absorbents and organic neutralizers) in the same container, in violation of Permit Condition 2.8 and 20.4.1.500 NMAC, both incorporating 40 C.F.R. § 264.177(a).
30. The Respondents failed to exercise reasonable and necessary precautions during unauthorized treatment and storage of ignitable or reactive waste, mixing of incompatible waste, or mixing of incompatible wastes and other materials to prevent reactions which could generate

or result in extreme heat, gas pressure, fire, explosions, or dangerous chemical reactions which Respondents knew or should have known could harm human health or the environment, in violation of Permit Conditions 2.8(1) and (5), incorporating 40 C.F.R § 264.17(b).

31. The Respondents failed to provide an oral report within 24 hours after the time they knew or should have known of the noncompliance which endangered human health or the environment, in violation of Permit Condition 1.9.12.1.

32. The Respondents failed to provide a written report within five (5) days after they knew or should have known of the noncompliance that endangered human health or the environment, in violation of Permit Condition 1.9.12.2.

II. COMPROMISE AND SETTLEMENT

33. The Parties enter into this Settlement Agreement to settle and completely resolve the alleged violations contained in the LANL Order, and any future claims, penalties, fines, liabilities or other sanctions against the Respondents and their officers, directors, employees, agents, constituent agencies, contractors, subsidiaries, successors, assigns, trustees, receivers, and other affiliates arising from or related to the February 14 incident at WIPP, the LANL Order, the Extent of Condition review performed by the Respondents at LANL, and the self-disclosures made by the Respondents since February 14, 2014, and in order to avoid further litigation and expense. This Settlement Agreement shall not be construed as an admission by Respondents to the alleged violations. The Parties admit jurisdiction and consent to the relief specified herein. The Parties agree that this Settlement Agreement is and shall be construed as consistent with the POA.

34. In compromise and settlement of the alleged violations contained in the LANL Order against the Respondents and their officers, directors, employees, agents, constituent agencies,

contractors, subsidiaries, successors, assigns, trustees, receivers and other affiliates, and any future NMED claims, penalties, fines, liabilities, or other sanctions arising from or related thereto as identified in paragraph 33, the Respondents shall implement the following Corrective Actions and Supplemental Environmental Projects (“SEP(s)”), as well as perform all Other Commitments as specified in paragraphs 42 and 43.

A. COMPLIANCE SCHEDULE FOR CORRECTIVE ACTIONS

35. The LANL corrective actions and corrective action schedules are included as *Attachment A*. The Respondents shall keep NMED apprised of progress made on corrective actions found in *Attachment A* on a monthly basis. The Respondents shall complete all the corrective actions contained in *Attachment A* and submit the required Evidence of Completion to NMED for approval as specified in *Attachment A*, unless an alternate date is approved by NMED in accordance with paragraph 58.

B. SUPPLEMENTAL ENVIRONMENTAL PROJECTS

36. The following SEPs include deadlines for implementation and final execution. Upon completion of each SEP, Respondents shall submit a signed and sworn Certification of Completion, executed by their authorized representatives, including the pertinent attachments and data related to the final implementation of each SEP, to NMED for approval within thirty (30) calendar days after the completion of each SEP. Following completion of a SEP and submittal of a Certification of Completion, NMED will review and provide Respondents with written approval certifying satisfactory completion of each SEP, or alternatively, written correspondence identifying the specific reason(s) why the SEP or Certification of Completion is deficient. The Respondents shall have an opportunity to correct any deficiencies and/or supplement the Certification of Completion before resubmitting to NMED for approval.

37. DOE shall expend up to \$12 million to improve DOE-owned transportation routes at LANL used for the transportation of transuranic waste to WIPP. Potential projects eligible for funding include widening portions of East Jemez Road and constructing egress/merge lanes at the intersection of East Jemez Road and New Mexico Route 4.

a) Within forty five (45) calendar days of the effective date of this Settlement Agreement, DOE will assign designees to participate in meetings with the New Mexico Department of Transportation (“NMDOT”) and NMED to determine the best use of these funds for improvements to DOE-owned transportation routes at LANL. All agreed to dates, deadlines and improvement projects will be memorialized in a written document between DOE, NMDOT and NMED, which shall be fully enforceable in accordance with paragraph 45, and will be attached hereto as *Addendum 1*.

b) DOE, NMDOT and NMED shall consider input from Los Alamos County.

38. DOE will fund independent, external triennial reviews of environmental regulatory compliance and operations at LANL to ensure that any regulatory deficiencies are identified. Each member of the triennial review team shall meet all applicable LANL facility security, access, environmental, safety, and health protocols and training requirements associated with access to LANL and LANL records. The results of the triennial reviews shall be made available to the Respondents, NMED and the public. The Respondents, their constituent agencies, contractors and affiliates agree to address any potential regulatory violations, or operational deficiencies, that could lead to potential environmental regulatory violations, identified in the triennial reviews. NMED agrees to refrain from taking any enforcement action against the Respondents, their constituent agencies, contractors and affiliates for any potential regulatory violations, or operational deficiencies, that could lead to potential environmental regulatory

violations, identified in the triennial reviews so long as the Respondents and their facility operators correct any deficiencies identified in the course of such reviews within sixty (60) calendar days of the finalization of each triennial review report, or for good cause shown, within another period of time beyond sixty (60) calendar days, if approved by NMED. DOE and NMED shall agree on a mechanism to procure and select a third party to perform the independent triennial reviews.

a) DOE shall submit to NMED a proposed *LANL Triennial Review Scope of Work and Guidelines*, within one (1) calendar year of the effective date of this Settlement Agreement for comment and final approval by NMED. Should DOE amend any provision contained in an approved *LANL Triennial Review Scope of Work and Guidelines* prior to any subsequent triennial review, DOE shall resubmit the amended *LANL Triennial Review Scope of Work and Guidelines* to NMED for approval.

b) The initial triennial review for LANL shall be completed and made public before the end of federal fiscal year 2018.

39. DOE shall expend \$7.5 million to design and install engineering structures in canyons in and around LANL to slow storm water flow and decrease sediment load to improve water quality in the area, allowing surface water management at a watershed scale.

a) Within sixty (60) calendar days of the effective date of this Settlement Agreement, the Respondents shall assign designees to participate in technical meetings with designees from NMED's Surface Water Quality Bureau, NMED's Department of Energy Oversight Bureau and the HWB. The designees shall consider input from Los Alamos County.

b) After the designees have met and discussed the preferred engineering structures and locations, the Respondents will submit a proposed *Storm Water Engineering Structure Work Plan* to NMED for approval. The approved work plan will be posted to the LANL Electronic Public Reading Room (“EPRR”), shall be fully enforceable in accordance with paragraph 45, and will be attached hereto as *Addendum 2*.

40. DOE shall expend \$2.5 million to fund increased sampling and monitoring capabilities for storm water runoff in and around LANL, with the results of sampling and monitoring to be shared with the public and NMED.

a) Within sixty (60) calendar days of the effective date of this Settlement Agreement, the Respondents shall assign designees to participate in technical meetings with designees from NMED’s Surface Water Quality Bureau, NMED’s Department of Energy Oversight Bureau and the HWB. The designees shall consider input from Los Alamos County.

b) After the designees have met and discussed the preferred increased sampling and monitoring plan options, the Respondents shall submit a proposed *Supplemental Sampling and Monitoring Work Plan* to NMED for approval. The approved work plan will be posted to the LANL EPRR, shall be fully enforceable in accordance with paragraph 45, and will be attached hereto as *Addendum 3*.

41. DOE shall expend \$10 million to replace aging potable water lines and install metering equipment for LANL potable water systems. These improvements will reduce potable water losses, minimize reportable spills and enhance water conservation efforts at LANL.

a) Within sixty (60) calendar days of the effective date of this Settlement Agreement, DOE will assign designees to participate in technical meetings with NMED's Construction Programs Bureau, NMED's Drinking Water Bureau and the HWB.

b) After the designees have met and discussed a plan for upgrading the aging potable water lines and installation of metering equipment, DOE shall submit a proposed *Water Line Improvement and Metering Upgrade Work Plan* to NMED for approval. The approved work plan will be posted to the LANL EPRR, shall be fully enforceable in accordance with paragraph 45, and will be attached hereto as *Addendum 4*.

C. OTHER COMMITMENTS

42. DOE agrees to enter into good-faith, informal discussions with NMED and NMDOT concerning the State's ongoing and future needs to maintain roads on WIPP designated routes and how best to address those needs in light of the 2012 expiration of the authorization contained in Section 16(a) of the Waste Isolation Pilot Plant Land Withdrawal Act, Pub. L. 104-201.

43. The Parties agree to enter into good-faith discussions concerning modifications to the 2005 Consent Order for completion of the cleanup of legacy contamination at LANL, and NMED agrees to consider foregoing penalties accrued under the 2005 Consent Order upon successful completion of those discussions.

III. TERMS AND CONDITIONS

A. RESERVATION OF RIGHTS AND DEFENSES

44. This Settlement Agreement shall not be construed to prohibit or limit in any way NMED from seeking any relief authorized by the HWA, HWMR or the LANL Permit for violation of any state or federal requirement applicable to Respondents not addressed in this Settlement

Agreement. NMED reserves all of the powers, authorities, rights and remedies, whether administrative or judicial, civil or criminal, legal or equitable, to enforce the requirements of the HWA, HWMR or the LANL Permit, for any past, present or future violation not addressed in this Settlement Agreement or in the LANL Order. This Settlement Agreement shall not be construed to prohibit or limit in any way Respondents from raising any defense to any such NMED action.

45. Subject to paragraphs 46 and 57, NMED retains its right to enforce this Settlement Agreement, *Attachment A*, addenda and any documents submitted by the Respondents relating thereto, by administrative or judicial action, including the issuance of additional civil penalties under NMSA 1978, § 74-4-10(C) (2001), for any failure to meet any deadline or perform any requirement contained in this Settlement Agreement (except those contained in paragraph 38), *Attachment A*, addenda and any document submitted by Respondents relating thereto, and therefore agrees not to reinstate or revive the LANL Order or any other violations contemplated in paragraph 33. The Respondents retain the right to challenge an enforcement action by NMED under this paragraph solely on the question of whether any such failure giving rise to the enforcement action occurred. NMED shall be entitled to recover its costs, including attorney fees, in any action brought to enforce this Settlement Agreement, *Attachment A*, addenda, and any document submitted by Respondents relating thereto, in which NMED is a prevailing party. Prior to initiating any enforcement action under this paragraph, NMED shall notify Respondents in writing of its intention and allow the Respondents ten (10) calendar days to submit new information solely on the question of whether the failure occurred.

46. Nothing in this Settlement Agreement, including paragraphs 36 through 41 above, is intended to require DOE to obligate or expend funds in excess of available appropriations,

apportionments, or allotments in violation of the Anti-Deficiency Act, 31 U.S.C. §§1341(a)(1)(A) and 1517(a). DOE will exhaust all of its legal authorities to take all necessary steps, including but not limited to budget reprogramming within its existing authority to effectuate the provisions of paragraphs 36 through 41. Funds used by DOE to execute this Settlement Agreement will not detract from the operational or environmental cleanup budget at LANL or from the WIPP recovery budget.

47. To the extent DOE has not evaluated in accordance with the National Environmental Policy Act (“NEPA”) the actions required by this Settlement Agreement, DOE will prepare an appropriate NEPA document analyzing the potential environmental impacts associated with these actions prior to commencing work on the action(s).

48. Nothing in this Settlement Agreement will obligate the Respondents to disclose information when such disclosure is contrary to law, including classified information.

49. In the event that NMED disapproves any timely submission required by this Settlement Agreement, *Attachment A*, addenda or any documents relating thereto, NMED shall identify the specific reason(s) for the disapproval, and the Respondents shall have the opportunity to correct any deficiencies and supplement the submission.

B. MUTUAL RELEASE

50. The Parties mutually release each other from all claims that the Parties raised or could have raised against the other regarding the facts and violations alleged in the LANL Order, and regarding the matters covered in paragraph 33 of this Settlement Agreement. This release extends to NMED, the Respondents and their respective officers, directors, employees, agents, constituent agencies, contractors, subsidiaries, successors, assigns, trustees, receivers and other affiliates.

C. WAIVER OF STATE LIABILITY

51. Respondents shall assume all costs and liabilities incurred in performing their obligations under this Settlement Agreement. NMED, on its own behalf and on behalf of the State of New Mexico, does not assume any liability for Respondents' performance of their obligations under this Settlement Agreement.

D. EFFECTIVE DATE AND TERMINATION DATES

52. This Settlement Agreement shall become effective on the date a Stipulated Final Order in this matter is signed by the Deputy Secretary of NMED, acting as Designee for the New Mexico Secretary of Environment.

53. Except as otherwise provided in this paragraph and paragraph 38, the terms of this Settlement Agreement shall terminate when Respondents have fulfilled the requirements of this Settlement Agreement. Respondents shall request termination of this Settlement Agreement in writing to NMED. The reservations of rights and defenses and the mutual release in paragraphs 44 to 50 shall not terminate, and shall remain in effect.

E. INTEGRATION

54. This Settlement Agreement, *Attachment A*, addenda and any documents submitted by Respondents relating thereto constitute the entire agreement between the Parties. All prior conversations, negotiations, meetings, discussions, drafts, and writings of any kind are specifically superseded by this Settlement Agreement. There exists between the Parties no oral agreement, understanding, statement, promise, representation, warranty, or inducement other than as may be expressly set forth in this Settlement Agreement.

F. AMENDMENT

55. This Settlement Agreement shall not be amended or modified except by express written agreement by the Parties.

G. BINDING EFFECT

56. This Settlement Agreement shall be binding on the Parties and their officers, directors, employees, agents, constituent agencies, contractors, subsidiaries, successors, assigns, trustees, receivers and other affiliates.

H. FORCE MAJEURE

57. The Respondents' obligation to comply with any provision of this Settlement Agreement shall be deferred under this paragraph to the extent and only for the duration that a failure in compliance is caused by force majeure. For the purposes of this Settlement Agreement, force majeure is defined as an event or set of circumstances which are beyond the Respondents' control and could not have been prevented by the Respondents' reasonable action or due diligence. Force majeure shall not apply to any failure in compliance due to increased costs or Respondents' financial inability to carry out the terms of this Settlement Agreement. The Respondents shall submit notification within five (5) days after the date when Respondents first know or should have known that a failure in compliance is reasonably foreseeable. Such written notice shall include the nature, cause and anticipated length of delay associated with the failure of compliance and all steps that Respondents have taken and will take to avoid or minimize the failure of compliance, with a schedule of implementation. Failure to provide written notice within the required time period shall constitute a waiver of Respondents' right to invoke force majeure for the particular event at issue. If NMED agrees that the failure in compliance is

attributable to force majeure, it shall extend the time for compliance only to the extent and only for the duration necessary to accommodate the force majeure.

I. EXTENSIONS OF TIME FOR GOOD CAUSE SHOWN

58. The Respondents may seek an extension of time to perform a requirement of this Settlement Agreement, or any attachment or requirement, for good cause, by sending NMED a written request for an extension of time and a proposed revised deadline or schedule. The Respondents will notify NMED within at least 72 hours if the Respondents determine they may not be able to meet a schedule and/or milestone contained in this Settlement Agreement, *Attachment A*, addenda or any document submitted thereto. The request shall state the length of the requested extension and describe the basis for the request. NMED will respond in writing to any request for extension within thirty (30) calendar days following receipt of the request. If NMED denies the request for extension, it will state the reasons for the denial in its written response.

J. NOTICE TO PARTIES

59. Whenever under the terms of this Settlement Agreement, any Party is required to provide notice to any other Party, or to submit any plan, report, or other document called for under this Settlement Agreement, such notice, plan, report or other document shall be sent or directed to the following persons via email and standard delivery:

NMED: Bureau Chief
NMED Hazardous Waste Bureau
2905 Rodeo Park Drive East # 1,
Santa Fe, NM 87505

Department of Energy: Kim Davis Lebak
Manager, Los Alamos Field Office
3747 West Jemez Rd., MS-A316
Los Alamos, NM 87544

LANS:

Dr. Michael T. Brandt
Associate Director, Environment, Safety & Health
Los Alamos National Security, LLC
PO BOX 1663, MS-K491
Los Alamos, NM 87545

K. AUTHORITY OF SIGNATORIES

60. The persons executing this Settlement Agreement represent that they have the requisite authority to bind either NMED or the Respondents, as appropriate, and that their representation shall be legally sufficient evidence of actual or apparent authority to bind NMED or the Respondents to this Settlement Agreement. This Settlement Agreement may be executed in any number of counterpart originals, each of which shall be deemed to constitute an original agreement, and all of which shall constitute one agreement. The execution of one counterpart by any Party shall have the same force and effect as if that Party had signed all other counterparts.

NEW MEXICO ENVIRONMENT DEPARTMENT

By: 
Ryan Flynn
Secretary, New Mexico Environment Department

Date: 1/21/2016

UNITED STATES DEPARTMENT OF ENERGY

By: 
Frank G. Klotz
Under Secretary for Nuclear Security, Department of Energy
Administrator, National Nuclear Security Administration

Date: 1/21/2016


LOS ALAMOS NATIONAL SECURITY LLC

By: 
Dr. Charles F. McMillan
President, LANS

Date: 1/21/16

APPROVAL OF STIPULATED FINAL ORDER HWB-14-20

Pursuant to section 20.1.5.600(B)(2) NMAC, this Settlement Agreement and Stipulated Final Order, agreed to by NMED and the Respondents (DOE and LANS), is hereby **APPROVED** as a **FINAL ORDER**.



BUTCH TONGATE
DEPUTY SECRETARY OF ENVIRONMENT

Date: 1/22/16

Attachment A

ACO para. No.	Ordered Action no.	Violations Addressed (para. no.)	Topic (Ordered Action description)	Response Actions		Documentation to Provide as Evidence of Completion ¹	Permit Change
				Complete*	In-Progress/Ongoing**		
129	1	111-128	No later than 60 days after this Order becomes final, Respondents shall submit to NIMED a written report describing any and all actions Respondents have taken to prevent any recurrence of violations described herein. The written report shall include changes to procedures that Respondents have implemented already.	ACO-1 Written report - Description of actions Respondents have taken/ will take to prevent recurrence NOTE: Discussion of the following ACO Paragraph 129 response actions will be included in the Written Report		ACO-1 Written report with enclosures noted for ACO 129 below	
129	1	111-115		Standing Order for Area G – Restrict Nitrate Salt waste processing		ADEP Standing Order, "Restriction on Processing Nitrate Salt", TA-54 AREA G, EP-AREAG-SO-1242, Rev.0	
129	1	111-115		Standing Order for All EWMO Facilities – Pause ALL legacy TRU waste processing at EWMO-supported facilities		ADEP Standing Order, "EWMO Legacy TRU Waste Pause", EP-DIV-SO-20222, R.1	
129	1	111-128		Standing Order for All [Laboratory Wide] Waste Generators – Waste Treatment Requirements – Lab-wide requirement for environmental compliance staff involvement in waste processing or treatment project planning		ADESH issued Standing Order, "Waste Treatment Requirements"	
129	1	116-119, 127, 128		Centralizing Environmental Compliance activities within ADESH for LANL		ENV Organization Chart (Before incident) ADESH organization Chart (After incident) Brief summary of how the organizational changes address the violations cited	

Attachment A

ACO para. No.	Ordered Action no.	Violations Addressed (para. no.)	Topic (Ordered Action description)	Response Actions		Documentation to Provide as Evidence of Completion ¹	Permit Change
				Complete*	In-Progress/Ongoing**		
129	1	125, 126		Introduction of Senior Management Team with technical background to understand complexity of chemical operations.		ADEP Organization Chart (Before incident) ADEP organization Chart (After incident) Brief summary of how the organizational changes address the violations cited (i.e., how the reorganization intends to fix the problems the previous organization failed to identify/prevent), timeline and bios.	
129	1	111-128		Develop Briefing to Senior Management		Briefing Summary Attendance Metrics	
129	1	111-128		Standing Order for incorporation of Exhibit F ENV review of subcontract scope and requirements for LANL Permit Compliance		Standing Order for Subcontractor ESH Oversight, ADESH-SO-004, Rev.0	
129	1	111-126		Review of P1020-2, Laboratory Document Control		Memo documenting review of LANL P1020-2 and basis for no revision in regards to ACO requirements.	
129	1	111-118, 119, 125-128		Training - Education and training of waste management workers (managers, supervisors, technicians, generators) to recognize when processing becomes treatment. The following have been revised	<ul style="list-style-type: none"> • Waste Generation Overview, Course 23263 • RCRA Personnel Training (Live), Course 7488 	Summary of training completed and training planned McCoy's 2015 RCRA Hazardous Waste Seminar	

Attachment A

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				Complete*	In-Progress/Ongoing**		
				<p>and/or developed and delivered to the appropriate audiences:</p> <ul style="list-style-type: none"> • McCoy's training • DEP/WMC RCRA Compliance training • RCRA Refresher for Waste Managers training • OJT training for TSD inspectors 	<ul style="list-style-type: none"> • RCRA Refresher, Course 28582 • Waste Generation Overview Annual Refresher, Course 21464 	<p>(3-day), Course Summary Waste Management Coordinator (WMC) and ENV Deployed staff (DEP) Environmental Personnel RCRA Compliance Training – Live Briefing (March 25, 2015) - Summary</p> <p>RCRA Refresher for Waste Managers, Course 28426</p> <p>Waste Generation Overview , Course 23263</p> <p>Waste Generation Overview Annual Refresher, Course 21464</p> <p>RCRA Personnel Training (Live), Course 7488</p> <p>RCRA Refresher, Course 28582</p> <p>NOTE: The RCRA Refresher for Waste Managers Training - Course 28426 to be included as a requirement for Subcontract Technical Representatives (STRs), as noted in the STR Qualification Standard</p>	

Attachment A

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						<p>NOTE: Both RCRA Personnel Training, [Course 7488] and RCRA Refresher, [Course 28582] have been reviewed and revised to bolster the LANL HWF permit detail. Both courses are required training for all Subcontract personnel working on LANL property, as noted in Subcontract Exhibits</p> <p>LANL Training Analysis for <i>On-the-Job Training for TSD Inspectors</i>, Course 27745 - Summary</p> <p>Training Analysis for <i>RCRA Refresher for Waste Managers</i>, Course 28426 - Summary</p> <p>Training Analysis for <i>RCRA Personnel Training</i>, Course 7488 – Summary</p> <p>Training Analysis for <i>RCRA Refresher</i>, Course 28582– Summary</p> <p>Training Analysis for <i>Waste Generation Overview</i>, Course 23263– Summary</p> <p>Training Analysis for <i>Waste</i></p>	

Attachment A

ACO para. No.	Ordered Action no.	Violations Addressed (para. no.)	Topic (Ordered Action description)	Response Actions		Documentation to Provide as Evidence of Completion ¹	Permit Change
				Complete*	In-Progress/Ongoing**		
129	1	120-124		<p>Waste Profile Form Validation for Mixed and Hazardous Waste</p> <p>Review of the characterization of all currently active LANL Hazardous waste streams.</p>		<p>Generation Overview Refresher, Course 21464 – Summary</p> <p>A report which identifies the list of active hazardous waste streams reviewed by the generator/ WMC teams and WM Division, with Conclusions/Summary</p>	
129	1	113-114		<p>Evaluation of RCRA Self-Assessment program needs (Compliance Technical Assistance Program or CTAP)</p>		<p>CTAP Evaluation and Gap Analysis Report with Compliance Technical Assistance Program (CTAP) Procedure (ENV-CP-QP-115) as enclosure.</p>	
129	1	113, 114, 116, 120, 122, 126, 127, 128		<p>Operating Record Validation -</p> <p>Validation of the LANL Operating Record at all TSDs (TAs 3, 50, 54, 55, 63, 14, 16, 36, 39 permitted and interim status areas walk down).</p>		<p>Summary of Compliance Technical Assistance Program (CTAP) Procedure (ENV-CP-QP-115) assessments and electronic access to the current document revision upon NIMED request. Provide periodic (Semi-annually, or upon NIMED request) listing of document(s) revisions.</p> <p>Summary of P409 Tool, ADESH-TOOL-803 Facility TSF Operating Record and</p>	

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				Complete*	In-Progress/Ongoing**		
129	1	113, 114, 120-124		<p>WCATS Data Change Control - Implementation of Waste Compliance and Tracking System (WCATS) change control process.</p>		<p>EWMO RCRA Permit Operating Record and Compliance Programs, EP-DIV-AP-21, R1.LANL to provide electronic access to the current document(s) revision upon NMED request. Provide periodic (Semi-annually, or upon NMED request) listing of document(s) revisions.</p>	
129	1	111-128		<p>Waste processing procedure review. Implementation of procedure reviews by ENV-CP. Summary of findings and procedure revisions to date.</p>	<p>Procedure reviews ongoing</p>	<p>Summary of ENV-RCRA-TOOL-719 Using WCATS to Submit Change Requests, and electronic access to the current document(s) revision (Semi-annually, or upon NMED request) listing of document revisions.</p> <p>ENV-CP-AP-200, Regulatory Procedure Review of Waste Management Procedures and electronic access to the current document revision. Provide periodic (Semi-annually, or upon NMED request) listing of document revisions.</p> <p>ACO-9 response will provide details on number and type of procedures identified and review status.</p>	

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129	1	121, 123, 124 and 132		<p>EOC Review The non-compliances addressed in the EOC self-disclosure letter are the result of an extensive review of all legacy non-nitrate salt wastes processed under deficient waste management procedures at LANL.</p> <p>EOC Completion Letter- (ADESH-15-162) Voluntarily reporting of non-compliances associated with MTRU wastes</p> <p>EOC Plan (EP-PLAN-10075, R0) - A plan for managing Extent of Condition by evaluating past remediation activities performed on transuranic (TRU) and mixed TRU (MTRU) waste</p> <p>LA-CIN01 Management Plan, (WD-PLAN-20280, R0) Defined steps to conservatively manage the LA-CIN01 waste containers and identify and apply appropriate EPA hazardous waste codes.</p>		<p>EOC Self Disclosure Letter - LA-UR-15-26713, DIR-15-127</p> <p>EOC Completion Letter- (ADESH-15-162)</p> <p>EOC Plan (EP-PLAN-10075, R0)</p> <p>LA-CIN01 Management Plan, (WD-PLAN-20280, R0)</p>	
129	1	121-128		<p>Description of actions being taken to strengthen Subcontractors' requirements to follow LANL ES&H policies and requirements through the Exhibit F conditions of their</p>	<p>Exhibit F1 will address Industrial Health hazards and controls</p> <p>Exhibit F2 will address</p>	<p>Description of plans to Implement major Exhibit F re-organization to result in two Exhibits (F1 and F2)</p>	

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				<p>subcontracts.</p> <p>Strengthening of Contract Exhibit F Field Verification Requirements for environmental risks.</p>	<p>Environmental Compliance and Waste Management requirements</p> <p>Summary of revisions proposed to strengthen P850 - Subcontract Technical Representative Procedure training and subcontractor oversight</p>		
130/131		115		<p>Submit a Permit Modification Request (PMR) for treatment of Nitrate Salt wastes</p>	PMR	Permit Modification Request	
130/131	2/3		<p>No later than 60 days after this Order becomes final, Respondents shall submit to NMED for review and comments the following:</p> <p>A. Reports on the scientific studies Respondents have conducted regarding LANL nitrate salt waste streams since February 14, 2014.</p> <p>B. The nitrate salt waste treatment options assessment report.</p> <p>C. A Plan to determine treatment methods for the nitrate salt waste streams. The Plan shall include a proposed schedule for submission of the</p>	<p>A. Remediated Nitrate Salt Chemical Reactivity Study</p> <p>B. Nitrate Salt Waste Options Assessment Report</p> <p>C. Remediation/Scheduling Plan as discussed in technical meetings. The Plan shall include referenced plans and a schedule for the surrogate waste test report.</p> <p>NOTE: The response to item C.iii [Final Report on Surrogate Waste Tests (Final Title TBD)] will include UNS and SWER1 analytical results.</p> <p>NMED requested LA-CIN01.001 Liquid Sampling Information Letter (ENV-DO-15-0313, LA-UR-1528468)</p>	<p>Final Report on Surrogate Waste Tests (Final Title TBD)</p>	<p>Chemical Reactivity and Remediated Remediation Strategy for Los Alamos Remediated Nitrate Salt (RNS) Wastes, D. L. Clark, D.J. Funk, LA-UR-15-22393</p> <p>Nitrate Salt Options Assessment Report LA-UR-15-25355</p> <p>Remediation/Scheduling Plan, including a the following:</p> <p>1. Sampling and Analysis Plan for Unremediated Nitrate Salt Waste, ENV-DO-15-0248, LA-UR-15-26357</p>	Yes

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				Complete*	In-Progress/Ongoing**		
			<p>following:</p> <ol style="list-style-type: none"> i. Sampling and analysis plan for unremediated nitrate salt waste ii. Surrogate waste testing plan iii. Report on surrogate waste tests iv. Safe handling and treatment plan for both remediated and unremediated nitrate salt wastes 			<p>2. <i>Treatment Study Work Plan for Nitrate salt Transuranic (TRU) Wastes</i></p> <p>3. <i>A schedule for the Final Report on Surrogate Waste Tests (Final Title TBD)</i></p> <p><i>[NOTE: Safe Handling and Treatment Plan for Remediated Nitrate Salt (RNS) and Unremediated Nitrate Salt (UNS) Wastes is addressed under the Remediation/Scheduling Plan]</i></p> <p>NMED requested LA-CIN01.001 Liquid Sampling Information Letter (ENV-DO-15-0313, LA-JR-1528468) with the following attachments:</p> <ul style="list-style-type: none"> • <i>List of Containers sampled;</i> • <i>List of Containers not sampled , but attempted;</i> • <i>List of Containers of Interest;</i> • <i>RTR Videos of Containers of Interest;</i> • <i>Analytical results</i> 	
132	4	121-124	<p>Immediately upon this Order becoming final, Respondents shall begin review of every mixed TRU waste stream which is currently managed</p>	<p>Summary report describing the MTRU waste stream characterization verification review</p>		<p>Summary report including development of Lessons Learned (to be described in summary report text).</p>	

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				Complete*	In-Progress/Ongoing**		
133	5	120-124	<p>or generated at LANL to verify that the characterization of the waste streams is accurate, sufficient, and updated. Respondents shall complete and document their review in the Facility Operating Record within 60 days after this Order becomes final.</p> <p>No later than 15 days after this Order becomes final, Respondents shall submit to NMED for review, the methodology by which Respondents conduct their annual reevaluation of all hazardous waste streams.</p>	<p>Description of Procedure used for waste streams annual reevaluation</p>		<p>Summary of WSP Annual Review Methodology per WCATS User's Manual, MAN-5004, R3, Sections 4.3.1.4 and 4.2.1.24</p> <p>Summary of procedure, Reviewing and Approving Waste Stream Profiles (WPS) in WCATS, WM-SVS-AP-201 and WCATS User's Manual to describe the process to enter new and review WSPs, (Sections 4.2.1 and 4.2.2). Provide electronic access to the current document revision. Provide periodic [Semi-annually, or upon NMED request] listing of document revisions.</p>	
134	6	120-124	<p>No later than 60 days after this Order becomes final, Respondents shall submit to NMED any documentation Respondents have entered in the Facility Operating Record for the most recent, annual</p>	<p>Copy of Operating Record documentation (selected WCATS printouts) for all active RCRA waste stream profiles</p>		<p>Copy of Operating Record documentation (select WCATS printouts) for all active RCRA waste stream profiles with</p> <ul style="list-style-type: none"> • WSP number 	

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				Complete [*]	In-Progress/Ongoing ^{**}		
			reevaluation of all hazardous waste streams at LANL.			<ul style="list-style-type: none"> Brief description of the waste stream Date the WSP was activated Date of the last annual review <p>The following WCATS fields were discussed among the technical team and the list updated to provide data:</p> <ul style="list-style-type: none"> WS_ANCILLARY, C_MASTER_TRU.MATRI X_CODE, WS_COMPOSITION, access to WS_DOCUMENTATION via the WCATS Application, access to WS_EDITLOG via the WCATS Application, relevant summary of WS_EPACODE, Summary of C_PARAMETER at WSP level, WS_WORKPATH --active options, relevant summary of C_SHIPDESC.HM_ID->DOT_HAZMAT.DOT_ID_NO, relevant summary of WS_CHAR_METHOD, <p>READ-ONLY access to WCATS provided to NMED staff through a LANL</p>	

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135	7	121-126	No later than 60 days after this Order becomes final, Respondents shall develop and submit to NMED procedures to implement an AK communication system within and between appropriate LANL organizations, including subcontractors, to ensure that AK documentation is accurate, sufficient, and updated.	<p>Description of procedure(s) for AK communication system, internal and external by establishing a Waste Characterization and Processing Review Process</p> <ul style="list-style-type: none"> To review waste stream profiles, associated documentation, waste processing procedures and address complex waste management issues. To establish communication systems and protocol to ensure AK documentation is accurate, sufficient, and updated. To include provisions to ensure/ strengthen communication of AK information between subcontractors, LANL Subcontract Technical Representatives (STRs) and appropriate LANL organizations. 		WCATS navigator, upon NMED request. Copy of WM-AP-0005, Waste Characterization and Processing Review	
136	8	111-128	No later than 60 days after this Order becomes final, Respondents shall revise and submit to NMED the CCP/LANL interface agreement to ensure appropriate organizations and subject matter experts communicate effectively and timely regarding changes in	<p>Status report on CCP/LANL interface agreement revisions</p>	Ongoing active participation in LANL CCP IA development	Copy of CCP/LANL Interface Agreement [revised, approved]	

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137	9	111-128	<p>waste management procedures, waste generation, waste treatment, waste repackaging and remediation, waste stream delineation, and waste characterization procedures to ensure that AK documentation is accurate, sufficient, and updated.</p> <p>No later than 60 days after this Order becomes final, Respondents shall revise and submit to NMED procedures and/or policies that ensure the proper LANL organizations and subject matter experts review and then approve or reject proposed waste management procedural changes.</p>	<p>Description of Process(es) for appropriate review of procedures that have waste management aspects or impacts** (See list under Documentation)</p> <ul style="list-style-type: none"> Reference to Waste Characterization and Processing Review process used to resolve difficult waste technical issues 		<p>Summary of [revised] policies and/or procedure(s) that have SME review and approval of proposed waste management aspects or impacts, including:</p> <ul style="list-style-type: none"> Summary of revised P409 Waste Management ADEP Technical Procedure Development, EP-AP-10007, R0; ENV-CP-AP-200 Regulatory Procedure Review of Waste Management Procedures; and ADEP Document Control, EP-AP-10001, R0 Waste Characterization and Processing Review, 	

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						WM-AP-0005, and Summary of Revised P409 – associated Tools <ul style="list-style-type: none"> • ADESH-IG-TOOL-101 – Waste Management Glossary • ADESH-AP-TOOL-111 – Waste Characterization • ADESH-AP-TOOL-115 Waste Compatibility • ADESH-AP-TOOL-206 – Hazardous Waste (General) • ADESH-AP-TOOL-300 – Radioactive Waste Management • ADESH-AP-TOOL-314 – Radioactive Waste Characterization • ADESH-AP-TOOL-803 – Facility Operating Record 	

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						<ul style="list-style-type: none"> • ADESH-AP-TOOL-810 – Waste Processing at Permitted Units • ADESH-AP-TOOL-901 – Elementary Neutralization • ADESH-AP-TOOL-902 – Absorption without a Permit • ADESH-AP-TOOL-906 – Treatment by the Waste Generator <p>Electronic access to the current document(s) revision will be provided upon NMED request.</p> <p>LANL will provide periodic (Semi-annually, or upon NMED request) listing of document revisions.</p> <p>Memorandum documenting review and evaluation. Evaluation results indicate no revision required to address violations.</p> <p><i>Technical Procedure Use</i></p>	
137	9			Description of Revisions to P300, <i>Integrated Work Management</i>			
137	9			Revise TA-55 Procedures to			

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				incorporate ENV-CP reviews		and Development Process, PA-AP-01016	
137	9			Define process for TA-54 Procedures to incorporate ENV-CP reviews		ADEP Technical Procedure Development, ER-AP-10007, R0	
137	9			Revise WETF Procedures to incorporate ENV-CP reviews		Document Development, WETF-AP-10, Rev. H	

* All actions in Completed Actions column will be completed no later than 60 days after this Order becomes final.

**Actions that will be initiated, but not completed, in 60 days are contained in the In-Progress/Ongoing Actions column.

¹ Some items being submitted as "Evidence of Completion" will not be "approved" by NMED (e.g., those subject to NMED review and comment); however, pursuant to paragraph 49 of the Settlement Agreement, if NMED disapproves any timely submission required by the Ordered Actions (e.g., response action), NMED shall identify the specific reason(s) for the disapproval, and the Respondent shall have the opportunity to correct any deficiencies and supplement the submission.