December 6, 2014

Charles F. McMillan, Director
Los Alamos National Laboratory
P.O. Box 1663, MS K499
Los Alamos, NM 87545

Kimberly Davis Lebak, Manager
Los Alamos Field Office
U.S. Department of Energy
3747 West Jemez Road, MS A316
Los Alamos, NM 87544

RE: ADMINISTRATIVE COMPLIANCE ORDER HWB-14-20
LOS ALAMOS NATIONAL LABORATORY
EPA I.D. NUMBER NM0890010515

Dear Mr. McMillan and Ms. Davis Lebak:

Enclosed is Compliance Order No. HWB-14-20 ("Order"), issued to the United States Department of Energy ("DOE") and Los Alamos National Security, LLC ("LANS"; collectively, with DOE, the "Respondents"), for violations of the Hazardous Waste Act ("HWA"), the Hazardous Waste Management Regulations and the Facility Permit, EPA I.D NUMBER NM 0890010515 ("Permit").

New Mexico is committed to the mission of our national laboratories, as the work is essential for our nation’s scientific advancements and global security. However, as New Mexico’s top environmental regulator, I have a duty to ensure environmental regulatory compliance at DOE facilities in the state to ensure the protection of human health and the environment. New Mexico does not need to choose between fulfilling the laboratory’s mission and protecting the environment. DOE now has an opportunity to learn from these mistakes and implement meaningful corrective actions that will ensure the long term viability of the Los Alamos National Laboratory ("LANL").

Compliance actions are the mechanism by which New Mexico can deter future noncompliance and ensure the continued protection of New Mexicans. Compliance actions should never be used to punish New Mexico for DOE’s own mistakes. New Mexico will not tolerate any attempts by DOE to divert resources from the environmental or operational budget at the federal facilities in our state to pay for the penalties assessed in the attached Order. Using funds that were appropriated for environmental remediation activities in New Mexico to pay for DOE’s own
mistakes, as DOE has done over the past few months by using LANL funds to pay for WIPP recovery activities, only serves to punish New Mexico for DOE’s own mistakes.

Additional compliance orders will be issued in the future as more information is received from self-disclosures, additional NMED requests for information, the Accident Investigation Board Phase 2 Report or any other source whatsoever. Nothing in this Order precludes or restricts New Mexico from issuing any subsequent order or from assessing any violation to the Respondents or taking any action pursuant to the HWA or any Permit condition. New Mexico retains the right to assess in any subsequent action or proceeding any violation of any current or future existing Permit condition either identical or similar to those alleged in this Order. New Mexico retains the right to adjust the assessed civil penalty in this Order whenever it obtains new information that impacts the basis for such civil penalty.

Please review the Order carefully so the Respondents understand their obligations under the Order. If you have any questions regarding this matter, please contact Jeffrey M. Kendall at (505) 476-2855.

Yours Truly,

[Signature]

Ryan Flynn
Cabinet Secretary
New Mexico Environment Department

cc: J. Kendall, General Counsel, NMED
    T. Kliphuis, Acting Director, NMED RPD
    J. Kieling, NMED HWB
    S. Pullen, NMED HWB
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    D. Woitte, Legal Counsel, LANS
    S. Deromma, Legal Counsel, DOE NNSA
STATE OF NEW MEXICO
ENVIRONMENT DEPARTMENT

ENVIRONMENTAL HEALTH DIVISION,
HAZARDOUS WASTE BUREAU,
Complainant,

v.

UNITED STATES DEPARTMENT
OF ENERGY, and
LOS ALAMOS NATIONAL SECURITY, LLC,
Respondents.

LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS COUNTY, NEW MEXICO

COMPLIANCE ORDER NO. HWB-14-20 (CO)

ADMINISTRATIVE ORDER REQUIRING COMPLIANCE
AND ASSESSING CIVIL PENALTY

Pursuant to the New Mexico Hazardous Waste Act ("HWA"), NMSA 1978, Sections 74-4-1 to -14, the Hazardous Waste Bureau ("HWB") of the Environmental Health Division ("Division") of the New Mexico Environment Department ("NMED") issues this Administrative Compliance Order ("Order") to the United States Department of Energy ("DOE"), and Los Alamos National Security, LLC ("LANS"; collectively, with DOE, the "Respondents"), requiring the Respondents to comply with the terms and conditions of this Order relating to the Los Alamos National Laboratory ("LANL" or "Facility"), and assessing a civil penalty for violations of the HWA, the Hazardous Waste Management Regulations, 20.4.1 NMAC ("HWMR"), and the Facility Permit, EPA I.D. NUMBER NM0890010515-TSDF ("Permit").

Administrative Compliance Order
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I. FINDINGS

A. PERMITTEES AND PERMIT CONDITIONS

1. Pursuant to the Department of Environment Act, NMSA 1978, Sections 9-7A-1 to -15, NMED is an agency of the executive branch within the government of the State of New Mexico.

2. NMED, through the HWB, is charged with administration and enforcement of the HWA and the HWMR.


4. The Respondents comprise a "person" within the meaning of Section 74-4-3(M) of the HWA.

5. The Respondents are engaged in the management, storage and treatment of hazardous waste at LANL. Hazardous waste management is subject to RCRA.

6. DOE is a federal agency; LANS is a for-profit corporation conducting business in New Mexico.

7. DOE and LANS are Co-Permittees under a Treatment, Storage, and Disposal Facility ("TSDF") Permit for LANL.

8. The Permit provides that any inaccuracies found in the Permit application may be grounds for termination, revocation and re-issuance, or modification of the Permit, and for enforcement action. See Permit Condition 1.5.
9. The Permit provides that the Respondents shall comply with all conditions in the Permit. See Permit Condition 1.9.1.

10. Any Permit noncompliance, except under the terms of an emergency permit, constitutes a violation of the HWA and RCRA. See Permit Condition 1.9.1.

11. Any such Permit noncompliance constitutes grounds by which the Department may enforce laws, regulations, and Permit requirements, and take any other authorized action by which to compel compliance by the Respondents using administrative or civil enforcement action, including civil penalties and injunctive relief, as provided in Permit Condition 1.9.2, or by using permit modification, suspension, termination, revocation, or denial of a permit modification request under Section 74-4-4.2 of the HWA and 40 C.F.R. §§ 270.41 and 270.43. See Permit Condition 1.9.1.

12. The Permit provides that any violation of a condition in the Permit may subject the Respondents or their officers, employees, successors, and assigns to: a compliance order under Section 74-4-10 of the HWA or § 3008(a) of RCRA (42 U.S.C. § 6928(a)); an injunction under Section 74-4-10 of the HWA or § 3008(a) of RCRA (42 U.S.C. § 6928(a)), or § 7002(a) of RCRA (42 U.S.C. § 6972(a)(1)(A)); civil penalties under Sections 74-4-10 of the HWA or §§ 3008(a) and (g) of RCRA (42 U.S.C. §§ 6928(a) and (g)), or § 7002(a) of RCRA; or some combination of the foregoing. See Permit Condition 1.9.2.

13. The Permit provides that in the event of noncompliance with this Permit the Respondents shall take all reasonable steps to minimize releases of hazardous wastes and hazardous constituents to the environment and they shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment pursuant to 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.30(d). See Permit Condition 1.9.5.

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14. The Permit provides that the Respondents shall at all times properly operate and maintain all facilities and systems of treatment and control and related appurtenances which are installed or used by the Respondents to achieve compliance with the Permit Conditions. See Permit Condition 1.9.6.

15. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance and quality control (QA/QC) procedures, in accordance with 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.30(e). See Permit Condition 1.9.6.

B. RADIOLOGICAL RELEASE, INVESTIGATION, AND DISCLOSURE

16. On February 14, 2014, at approximately 11:14 PM, there was an incident in the underground repository at the Waste Isolation Pilot Plant ("WIPP"), which resulted in the release of Americium and Plutonium from one or more transuranic ("TRU") mixed waste containers into the environment ("Release"). See AIB Phase 1 Report, page ES-1.

17. On April 22, 2014, the DOE Office of Environmental Management Accident Investigation Board ("AIB") released the Phase 1 Accident Investigation Report titled, *Radiological Release Event at the Waste Isolation Pilot Plant on February 14, 2014* ("AIB Phase 1 Report"), which concluded that a breach of at least one TRU waste container in the WIPP underground was the direct cause of the Release. See AIB Phase 1 Report.

18. On May 2, 2014, the DOE Carlsbad Field Office published an Occurrence Reporting and Processing System Operating Experience Report Notification, titled *Potential for the Presence of Untreated Nitrate Waste Salts in TRU Waste Packages* ("ORPS Report"). The ORPS Report concluded that an energetic chemical reaction could have resulted from an untreated nitrate...
compound coming into contact with cellulosic material present in the packages. See ORPS Report, page 4. Certain nitrate salt-bearing waste containers were present in the affected area in Panel 7, Room 7, which contained an americium/plutonium ratio similar to the isotopic ratios seen on environmental filter samples at Stations A and B taken during the Release, including containers generated at the Los Alamos National Laboratory (“LANL”).


20. Based on information in the AIB Phase 1 Report, the ORPS Report, and the photographic evidence in the May 16, 2014, WIPP Update, NMED concluded that the breached container was a source of the Release. May 19, 2014, Administrative Order.


**Treatment of Waste—Neutralization—without a Permit**

23. The HWMR state in part that “RCRA requires a permit for the ‘treatment,’ ‘storage,’ and ‘disposal’ of any ‘hazardous waste’ as identified or listed in 40 C.F.R. part 261.” See 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.1(c).

24. The HWMR define “treatment” as “any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition.
of any hazardous waste so as to neutralize such waste....” See 20.4.1.100 and 20.4.1.900 NMAC, incorporating 40 C.F.R. §§ 260.10 and 270.2.

25. The HWMR exempt owners and operators of elementary neutralization units from the requirement to obtain a hazardous waste treatment permit. See 20.4.1.500 NMAC, incorporating 40 C.F.R. §264.1(g)(6).

26. The HWMR define “elementary neutralization unit” as “a device which: 1) Is used for neutralizing wastes that are hazardous only because they exhibit the corrosivity characteristic defined in § 261.22 of this chapter, or they are listed in subpart D of part 261 of the chapter only for this reason; and 2) Meets the definition of tank, tank system, container, transport vehicle, or vessel in §260.10 of this chapter.” See 20.4.1.100 NMAC, incorporating 40 C.F.R. § 260.10.

27. The HWMR define corrosivity as a solid waste that “is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5.” See 20.4.1.200 NMAC, incorporating 40 C.F.R. § 261.22(a)(i).

28. The HWMR prescribe that “[a] solid waste that exhibits the characteristic of corrosivity has the EPA Hazardous Waste Number of D002.” See 20.4.1.200 NMAC, incorporating 40 C.F.R. § 261.22(b).


30. On July 1, 2014, the Respondents notified NMED that under EP-WCRR-WO-DOP-0233, “Glovebox operators (operators) performed a pH test of the liquid and added neutralizing agents
(powder and liquids) as necessary to neutralize the liquid waste. During this process, the operators encountered liquids that had a pH of less than 2 or greater than 12.5 and were therefore corrosive.” See Addendum to the LANL Hazardous Waste Facility Permit Reporting on Instances of Noncompliance and Releases for Fiscal Years 2012 and 2013 (“Addendum”), page 3.

31. On July 1, 2014, the Respondents notified NMED that “[t]he processing of the nitrate salt-bearing waste involved adding neutralizing agents to a waste stream and did not qualify for the elementary neutralization treatment permit exemption because this waste stream was assigned EPA Hazardous Waste Numbers D and F, and was not a hazardous waste solely due to the corrosivity (D002) characteristics or listing.” See Addendum, page 3.

32. On July 1, 2014, the Respondents notified NMED that Respondents had concluded that “the processing of the unconsolidated nitrate salt-bearing waste drums... falls outside the permit exemptions for treatment activities required by NMED rules.” See Addendum, page 3.

33. The Respondents acknowledged that the processing of nitrate salt-bearing waste by the addition of neutralizing agents to a waste stream constituted “noncompliance.” See Addendum, page 3.

34. NMED’s review of documentation provided by Respondents indicates that, from October 11, 2011, through April 24, 2014, Respondents neutralized liquid from 232 parent nitrate salt-bearing waste containers that exhibited the characteristic of corrosivity, EPA Hazardous Waste Number (“HWN”) D002, in the glovebox at TA-50-69. See Respondents' September 30, 2014, Response to NMED's August 26, 2014, Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3; see also Addendum, page 3; Department of Energy Office of Inspector General Report, dated September
30, 2014 ("DOE/IG-0922"), page 5; Energy Solutions Memo from Miles Smith to Dan Cox, dated May 19, 2014 ("Energy Solutions Memo").

35. The 232 parent nitrate salt-bearing waste containers were not hazardous for corrosivity only, and therefore the Respondents' neutralization activities did not qualify for the exemption at 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.1(g)(6). See Respondent's September 30, 2014, Response to NMED's August 26, 2014, Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachment 2; Addendum, page 3.

Treatment of Waste—Adding Absorbent—Without a Permit

36. The HWMR state, in part, that "RCRA requires a permit for the 'treatment,' 'storage,' and 'disposal' of any 'hazardous waste' as identified or listed in 40 C.F.R. part 261." See 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.1(c).

37. The HWMR define "treatment" as "any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste...." See 20.4.1.100 and 20.4.1.900 NMAC, incorporating 40 C.F.R. §§ 260.10 and 270.2.

38. The HWMR exempt owners and operators who add absorbent to waste in a container at the time waste is first placed in the container from the requirement to obtain a hazardous waste treatment permit. See 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.1(g)(10).

39. LANL procedures issued on August 1, 2012 authorized the glovebox operators at TA-50-69 to add organic absorbent to nitrate salt waste. The procedures did not require operators to add the absorbent to the waste at the time the waste was first placed into the container. See EP-
40. On July 1, 2014, the Respondents notified NMED that Respondents added “absorbents in some deviating locations (e.g., parent drums and glovebox floor) that do not appear to meet the permit exception that absorbent be added ‘the first time’ the waste is placed in a ‘container.’” See Addendum, pages 3-4.

41. On July 1, 2014, the Respondents notified NMED that Respondents concluded that “the processing of the unconsolidated nitrate salt-bearing waste drums...falls outside the permit exemptions for treatment activities required by NMED rules incorporating 40 C.F.R. §§264.1(g)(6) [and] (10) and 40 C.F.R. §§270.1(c)(2)(iv) and (vii).” Respondents acknowledged that adding absorbents in deviating locations constitutes “noncompliance.” See Addendum, page 3.

42. Respondents provided documentation which indicated that, from October 11, 2011, through April 24, 2014, Respondents had added organic absorbent to nitrate salt waste removed from parent containers and subsequently placed into 672 daughter containers in the glovebox at TA-50-69. See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014, Request for Information—Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachment 2; Addendum, pages 2-3; DOE/IG-0922, pages 2-4; Energy Solutions Memo.

43. Respondents did not add absorbent to the waste at the time the waste was first placed into the containers, and therefore did not qualify for the exemption at 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.1(g)(10). See Respondents’ September 30, 2014, Response to

**Failure to Obtain a Permit to Treat Waste**

44. The HWMR state, in part, that “RCRA requires a permit for the ‘treatment,’ ‘storage,’ and ‘disposal’ of any ‘hazardous waste’ as identified or listed in 40 C.F.R. part 261.” See 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.1(c).

45. The HWMR define “treatment” as “any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste....” See 20.4.1.100 and 20.4.1.900 NMAC, incorporating 40 C.F.R. §§ 260.10 and 270.2.

46. The Permit states that “[t]he Permittees shall accept, store, treat, or otherwise manage at permitted units at the Facility only those hazardous wastes the Permittees proposed to manage at the units in the Permit Application, which are those wastes bearing the EPA Hazardous Waste Numbers (i.e., waste codes) listed in Attachment B (Part A Application), unless otherwise prohibited by this Permit.” See Permit Condition 2.2.

47. The WCCRF is a permitted container storage unit at TA-50-69. See Permit Condition 3.11.1; Permit Attachments A, Section A3, B (Part A Application), and J, Table J-1.

48. The Permit does not authorize the Respondents to conduct treatment of hazardous waste at TA-50-69. See Permit Attachments B (Part A Application), and J, Table J-1.

49. On July 1, 2014, the Respondents notified NMED that “[t]he Permittees conclude that the processing of the remediated nitrate salt-bearing wastes constituted a noncompliance that resulted in unpermitted treatment.” See Addendum, page 4.
50. The HWMR require Respondents to submit a Class 1 permit modification for prior NMED approval to modify or add container units or "treatment processes necessary to treat wastes that are restricted from land disposal to meet some or all of the applicable treatment standards...." See 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.42 Appendix I, Item F.1.c.


52. The Permit states that "[t]he Permittees shall inform the Department of any deviation from, or changes in, the information contained in the Application that would affect the Permittees' ability to comply with this Permit. Upon knowledge of such deviations, the Permittees shall, within 30 days, provide this information in writing to the Department in accordance with Permit Conditions 1.9.14 and 1.9.15 and 40 C.F.R. §§ 270.30(l)(11) and 270.43(a)(2), which are incorporated herein by reference." See Permit Condition 1.5.

53. Respondents did not notify NMED in writing within 30 days of discovery that there was any deviation from or changes in the information contained in the Permit Application by which Respondents were out of compliance with the Permit. Respondents treated hazardous waste at TA-50-69 from October 11, 2011, through April 24, 2014, but did not notify NMED in writing of the treatment activities at TA-50-69 until July 1, 2014. See Respondents' September 30, 2014, Response to NMED's August 26, 2014, Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3; see also Addendum, page 4.

54. The Permit states that "[w]henever the Permittees become aware that they have failed to submit any relevant facts in a permit application, or have submitted incorrect information in a permit application or a report to the Department, the Permittees shall promptly report such facts..."
or information in compliance with 40 C.F.R. § 270.30(1)(11), which is incorporated herein by reference." See Permit Condition 1.9.15.


Failure to Notify NMED of Planned Changes

56. The Permit states that "[t]he Permittees shall give advance written notice to the Department of any planned changes to any permitted unit at the Facility or activity which may result in noncompliance with Permit requirements (see 40 C.F.R. § 270.30(1)(2))." See Permit Condition 1.9.11.

57. Respondents did not provide NMED advanced written notice that they would treat any hazardous waste at TA-50-69.

58. The Permit prescribes that, "[t]he Permittees may not treat or store hazardous waste at a new permitted unit or in a modified portion of an existing permitted unit except as provided in 40 C.F.R. § 270.42 until the Respondents have complied with the requirements of 40 C.F.R. §§ 270.30(1)(2)(i) and (ii)." See Permit Condition 1.9.21.

59. The HWMR require the Respondents to notify NMED in advance of any changes to a permitted unit, and provide NMED the opportunity to inspect the modified unit to ensure compliance with the Permit. See 20.4.1.900 NMAC, incorporating 40 C.F.R. §§ 270.30(1)(2)(i) and (ii).
60. The Respondents did not provide NMED an opportunity to inspect the modified unit to ensure compliance with the Permit. See Respondents' September 30, 2014, Response to NMED's August 26, 2014, Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3; see also Addendum, page 4.

**Failure to Adequately Characterize Waste**

61. The Permit requires that "[t]he Permittees shall accept, store, treat, or otherwise manage at permitted units at the Facility only those hazardous waste streams that have been fully characterized in accordance with the requirements of 40 C.F.R. § 264.13, which is incorporated herein by reference, the conditions in this Permit Part, and Attachment C (Waste Analysis Plan)." See Permit Condition 2.4.1.

62. The Permit requires Respondents to obtain and document "all applicable EPA hazardous waste numbers" prior to treating, storing, or otherwise managing a hazardous waste stream. See Permit Condition 2.4.1(1).

63. The Permit requires that "[w]hen acceptable knowledge is insufficient to fully characterize a waste stream, the Permittees shall utilize sampling and analysis to complete that characterization." See Permit Condition 2.4.1; see also Permit Condition C.3.2.

64. On July 1, 2014, the Respondents notified NMED that "[i]n the early 1990s, the Respondents conducted initial hazardous waste characterization of all mixed transuranic waste streams, which included extensive information on acceptable knowledge and other documentation." See Addendum, page 4.

65. On July 1, 2014, the Respondents notified NMED that "[d]uring the processing of the nitrate salt-bearing waste drums [at TA-50-69] operators conducted pH tests and determined that
some of the liquids decanted from the parent drum(s) had a pH of less than 2 and were corrosive for D002.” See Addendum, page 4.


67. The CCP AK summary report that was released on February 10, 2014, states the waste in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 are not liquid and are therefore not corrosive, illustrating that the characterization of these waste streams at the time they were placed in storage was insufficient. See CCP-AK-LANL-006, Rev. 13, February 10, 2014, pages 108, 126, 142, and 156.

68. On July 30, 2014, the Respondents notified NMED that they had assigned HWN D001 (ignitability characteristic) for ignitibility to the 57 remediated nitrate salt-bearing waste containers and to the 29 un-remediated nitrate salt-bearing waste containers in isolation at LANL. See July 30, 2014, Written Notice Regarding Application of EPA Hazardous Waste Number D001 to Certain Nitrate Salt-Bearing Waste Containers at LANL.

69. In a letter dated September 5, 2014, LANL informed NMED that they had assigned HWN D001 to all nitrate salt-bearing waste containers in storage at LANL because analytical results from tests conducted on May 22, 2014, and July 29, 2014, indicated that LANL could not exclude the application of HWN D001, and that the nitrate salt-bearing waste containers could be classified as oxidizers. Further, LANL failed to mitigate the ignitability characteristic when it remediated the nitrate salt-bearing waste containers using organic absorbents instead of the

70. On October 21, 2014, the Respondents confirmed to NMED that they “[F]ailed to conduct an adequate hazardous waste determination for the nitrate salt-bearing wastes with regard to EPA Hazardous Waste Number (HWN) D001 (ignitability characteristic)”; and, Respondents confirmed they “[F]ailed to meet specific LANL Permit requirements.” See Second Addendum, Reporting Additional Instances of Noncompliance with Hazardous Waste Facility Permit and Generator Requirements, LANL (“Second Addendum”), page 3.

71. The CCP AK summary report, released February 10, 2014, states the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 are not an oxidizer, illustrating that the characterization of these waste streams at the time they were placed in storage was insufficient. See CCP-AK-LANL-006, Rev. 13, February 10, 2014, pages 107, 126, 142, and 156.

72. The nitrate salt-bearing waste containers that were processed at TA-50-69 were from waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001. See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014, Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3.

73. Subsequent processing, sampling and analysis, and re-evaluation of AK indicates that some containers in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 contained HWN D001 and HWN D002 waste. See Respondents’ September 5, 2014, Response to NMED’s Information Request Regarding LANL’s Nitrate Salt-Bearing Waste
74. The Respondents' AK used for initial characterization of waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 was insufficient, and the Respondents did not utilize sampling or analysis to complete the characterization. The Respondents' initial characterization of waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 did not indicate that the waste streams contained HWN D001 or HWN D002. The Respondents did not fully characterize waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 prior to storage as required by Permit Condition 2.4.1.

**Failure to Reevaluate AK**

75. The Permit prescribes that "Permittees shall ensure that the initial characterization of any hazardous waste stream managed under this Permit is reviewed or repeated to verify that the characterization is accurate and up to date (see 40 C.F.R. § 264.13(b)(4)). The Permittees shall document this review in the Facility Operating Record." See Permit Condition 2.4.7.

76. The Respondents did not conduct a review of the initial characterization to verify that the characterization was accurate or updated. See Addendum, page 4.

77. The Permit requires Respondents to "Annually reevaluate all hazardous waste streams generated to verify the accuracy of initial and subsequent characterization results. The annual reevaluation shall be required no later than one year from the date of initial characterization of the hazardous waste stream or one year from the last annual reevaluation." See Permit Condition 2.4.7(1).
78. The Respondents knew as early as October 2011 that some of the liquid in the nitrate salt-bearing waste containers had a pH below 2, and therefore Respondents were required to reevaluate the characterization and assign HWN D002 for corrosivity. See Respondents’ September 30, 2014, Response to NMED’s August 26, 2014, Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachment 3.

79. Respondents had an obligation to reevaluate the nitrate salt-bearing waste streams after becoming aware of subsequent characterization results that indicated the waste may be ignitable (HWN D001) and corrosive (HWN D002).

80. The Permit requires that Respondents, “Recharacterize hazardous waste whenever there is a change in the waste generating processes which includes a change in the status of the waste for purposes of Land Disposal Restrictions or when analytical results indicate a change in the waste stream.” See Permit Condition 2.4.7(2).

81. On July 1, 2014, Respondents notified NMED that “[D]uring the processing of the nitrate salt-bearing waste drums... operators conducted pH tests and determined that some of the liquids decanted from the parent drum(s) had a pH of less than 2 and were corrosive for D002. Based on the operators’ analytical results, Permittees concluded that they had an obligation to reevaluate the unconsolidated nitrate salt-bearing waste to assess the accuracy of the initial waste characterization in accordance with Permit Condition 2.4.7(2).” See Addendum, page 4.

82. Respondents were informed in May 2012, that the nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 were potentially oxidizers, and therefore Respondents were required to reevaluate the characterization and assign HWN D001 for ignitibility. See Amount of Zeolite Required to Meet the Constraints Established

83. The Permit requires that, “Permittees shall perform reevaluation of initial characterization information and annual verification in accordance with Permit Condition 2.4.7.” See Permit Attachment C, Condition C.3.

84. The Respondents did not perform reevaluation of initial waste characterization information or annual verification pursuant to Permit Condition 2.4.7.

**Mixing Incompatible Waste/Materials in a Container**

85. The Permit states that “Permittees shall manage ignitable, reactive, and incompatible hazardous waste in containers and tanks in compliance with the requirements of 40 C.F.R. §§ 264.17, 264.176, 264.177, 264.198, and 264.199, which are incorporated herein by reference, and Permit Parts 3 and 4.” See Permit Condition 2.8.

86. The HWMR state that “Incompatible waste, or incompatible wastes and materials (see appendix V for examples), must not be placed in the same container, unless §264.17(b) is complied with.” See 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.177(a).

87. The HWMR state that mixing “nitrates” with “other flammable and combustible wastes” could lead to fire, explosion, or violent reaction. See 20.4.1.500 NMAC, incorporating Appendix V to 40 C.F.R. part 264.

88. The Permit, incorporating requirements from 40 C.F.R. § 264.17(b), prescribes that “Permittees shall take precautions during the treatment or storage of ignitable or reactive waste, the mixing of incompatible waste, or the mixing of incompatible wastes and other materials to prevent reactions that could lead to or cause … (1) generation of extreme heat, pressure, fire,
explosions, or violent reactions [or] (5) a threat to human health or the environment. (see 40
C.F.R. § 264.17(b)).” See Permit Conditions 2.8(1) and (5).

89. U.S. Department of Transportation regulations defines a Division 5.1 “oxidizer” as “a
material that may, generally by yielding oxygen, cause or enhance the combustion of other
materials.” See 49 C.F.R. § 173.127.

90. The nitrate salts in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001,
and LA-MHD01.001 are an oxidizer. See Respondents’ September 5, 2014, Response to
NMED’s Information Request Regarding the Los Alamos National Laboratory Nitrate Salt-
Bearing Waste Container Isolation Plan, pages 3-4.

91. On October 21, 2014, Respondents confirmed to NMED that they had “[P]laced an
organic absorbent and neutralizer containing triethanolamine into drums with the nitrate salt-
bearing waste (D001) which, in turn, would constitute placement of incompatible wastes and
materials in the same container....” See Second Addendum, page 8.

92. Incompatible materials were mixed when Respondents added organic absorbent to nitrate
salt waste that was subsequently placed into 672 containers at TA-50-69. See Respondents’
September 30, 2014, Response to NMED’s August 26, 2014, Request for Information, Treatment
of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and
3.

93. Incompatible materials were mixed when Respondents added an organic neutralizer to
liquid from parent nitrate salt-bearing waste containers at TA-50-69; and the neutralized liquid
was then mixed with the organic absorbent and placed into daughter containers. See
Respondents’ September 30, 2014, Response to NMED’s August 26, 2014, Request for
Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3.

94. Respondents combined materials (organic absorbent and organic neutralizers) that were incompatible with waste (nitrate salts) in 672 containers and the Respondents did not take precautions during the unauthorized treatment and storage of ignitable, incompatible waste to prevent reactions that could lead to or cause the generation of extreme heat, pressure, fire explosions, or violent reactions; or a threat to human health or the environment. See Respondents' September 30, 2014, Response to NMED's August 26, 2014, Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3.

95. Respondents mixed incompatible waste in 672 containers and did not take the required precautions to manage such waste under Permit Condition 2.8, incorporating 40 C.F.R. §§ 264.177(a) and 264.17(b).

**Failure to Notify NMED of Noncompliant Acts or Omissions that Endangered Human Health and the Environment**

96. The Permit states that "The Permittees shall report to the Department, both orally and in writing, any noncompliance that may endanger human health or the environment and any incident that requires implementation of Attachment D (Contingency Plan) (see 40 C.F.R. § 270.30(l)(6)). This report shall be submitted in accordance with Permit Conditions 1.9.12.1 and 1.9.12.2." See Permit Condition 1.9.12.

97. The Permit requires Respondents to provide an oral report within 24 hours after the time they become aware of the noncompliance specified in Permit Condition 1.9.12. See Permit Condition 1.9.12.1.
98. The Permit requires Respondents to provide a written report within five days after the
time they become aware of the noncompliance specified in Permit Condition 1.9.12. See Permit
Condition 1.9.12.2.

99. On May 8, 2012, the LANL-Carlsbad Office Difficult Waste Team ("DWT") provided
recommendations on the amount of zeolite/kitty litter Respondents must add to nitrate salts to
remove the characteristic of ignitibility (HWN D001) from the nitrate salts. See “Amount of
Zeolite Required to Meet the Constraints Established by the EMRTC Report RF 10-13:
Application to LANL Evaporator Nitrate Salts,” by LANL-Carlsbad Office Difficult Waste
Team, May 8, 2012; see also EMRTC Report RF 10-13.

100. As early as 2012, the DWT notified Respondents to discontinue use of organic absorbents
with nitrate salts because of the possible dangers of mixing organic material with nitrates. See
DOE/IG-0922, page 4.

101. The DOE Office of Inspector General ("DOE-OIG") found that Respondents “made a
procedural change to its existing waste procedures that did not conform to technical guidance
provided by the Department for the processing of nitrate salt waste.” See DOE/IG-0922, page 2.

102. The DOE-OIG determined that Respondents did not include appropriate individuals
and/or organizations in Respondents’ procedure approval process, which in turn, among other
things, led to an incompatible mixture of hazardous waste (nitrate salts) and remediation
materials (organic absorbents and neutralizers) that together “were known to be inherently
hazardous.” See DOE/IG-0922, pages 3-4.

103. The Respondents did not maintain adequate records tracking the precise amounts of
organic absorbent, organic neutralizers, or nitrate salts that were combined in any given
container.

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104. From DOE's technical expertise and guidance, and from commonly available knowledge about nitrate salts being incompatible with the organic absorbent or organic neutralizer, Respondents knew or should have known that combining those materials in containers would have endangered human health or the environment.


107. A LANL nitrate salt-bearing waste container, with added incompatible waste including organic absorbent, was emplaced in the WIPP underground where it eventually breached its containment capacity and contributed to the Release in the WIPP underground.

108. After reviewing associated documentation and attendant facts and circumstances, NMED has concluded that the addition of organic absorbent and organic neutralizer to nitrate salt-bearing waste containers at TA-50-69 endangered human health and the environment at each location where such containers were stored, transported, or emplaced.

109. After reviewing associated documentation and attendant facts and circumstances, NMED has concluded that Respondents knew or should have known that the addition of organic absorbent and organic neutralizer to nitrate salt-bearing waste containers at TA-50-69 would
endanger human health or the environment at each location where such containers were stored, transported, or emplaced.

110. Respondents did not notify NMED orally within 24 hours or in writing within five days of becoming aware that the addition of organic absorbent and organic neutralizer to nitrate salt-bearing waste at TA-50-69 created known or knowable dangers to human health or the environment.

II. VIOLATIONS

111. 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 HWNs; and, therefore Respondents were not authorized to neutralize hazardous waste pursuant to the elementary neutralization exemption at 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.1(g)(6).

112. 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 the 672 containers; and, therefore, Respondents were not authorized to operate under the absorption exemption at 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.1(g)(10).

113. 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).

114. Respondents failed to confine waste treatment to only those units which Respondents had proposed as treatment units in their Permit Application in violation of Permit Condition 2.2.

115. 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.
116. Respondents failed to notify NMED in writing within 30 days of discovery of the deviation from the information contained in the Application which caused Respondents to be out of compliance with the Permit in violation of Permit Condition 1.5.

117. 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.

118. 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.

119. Respondents failed to provide NMED an opportunity to inspect the modified unit to ensure Respondents complied with the Permit in violation of Permit Condition 1.9.21.

120. 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.

121. 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.

122. 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).

123. 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).
124. 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.

125. 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).

126. 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).

127. 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.

128. Respondents failed to provide a written report within five 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.

III. SCHEDULE OF COMPLIANCE

129. No later than 60 days after this Order becomes final, Respondents shall submit to NMED 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.
130. No later than 60 days after this Order becomes final, Respondents shall submit to NMED for review and approval a plan to remediate and/or treat the 57 remediated daughter containers pursuant to all applicable HWMR and Permit requirements.

131. No later than 60 days after this Order becomes final, Respondents shall submit to NMED for review and approval a plan to remediate and/or treat the 29 un-remediated parent containers pursuant to all applicable HWMR and Permit requirements.

132. Immediately upon this Order becoming final, Respondents shall begin review of every mixed TRU waste stream which is currently managed 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.

133. No later than 15 days after this Order becomes final, Respondents shall submit to NMED for review and approval the procedures and methodology by which Respondents conduct their annual reevaluation of all hazardous waste streams.

134. 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 reevaluation of all hazardous waste streams at LANL.

135. 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, and between LANL and appropriate external organizations (e.g., CCP, WIPP, Difficult Waste Team, etc.), to ensure that AK documentation is accurate, sufficient, and updated.
136. 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 waste management procedures, waste generation, waste treatment, waste repackaging and remediation, waste stream delineation, and waste characterization procedures.

137. 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.

IV. CIVIL PENALTY

138. Pursuant to the Sections 74-4-10(B) and 74-4-12 of the HWA, Respondents are liable for a civil penalty of up to $10,000.00 per day of noncompliance for each violation of the HWA and HWMR. NMED hereby assesses a civil penalty of $36,604,649.00 against the Respondents for the violations described in Section II. The penalty amount is calculated pursuant to NMED's HWB Civil Penalty Policy.

139. No later than 30 days after this Order becomes final, Respondents shall deliver, by hand or mail, as payable to the Hazardous Waste Emergency Fund, a certified check, bank draft or other guaranteed negotiable instrument, addressed to the following:

Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505.
V. NOTICE OF POTENTIAL ADDITIONAL PENALTIES

140. If Respondents fail to comply in a timely manner with the Schedule of Compliance, the Secretary may assess additional civil penalties of up to $25,000.00 for each day of continued noncompliance pursuant to Section 74-4-10(C) of the HWA.

141. Nothing in this Order shall preclude or restrict NMED from issuing any subsequent order or from assessing any violation to the Respondents pursuant to the HWA or any Permit Condition. NMED retains the right to assess in any subsequent action or proceeding any violation of any current or future existing Permit Condition either identical or similar to those alleged in this Order. NMED retains the right to adjust the assessed civil penalty in this Order whenever it obtains new information that impacts the basis for such civil penalty.

VI. RIGHT TO ANSWER AND REQUEST A HEARING

142. Pursuant to Section 74-4-10(H) of the HWA, and NMED’s Adjudicatory Procedures, 20.1.5.200 NMAC, Respondents may file a written request for a public hearing with the Hearing Clerk no later than 30 days from the receipt of this Order. An Answer must be filed with the Request for Hearing. The Answer shall:

a) Clearly and directly admit, deny, or explain each of the factual allegations contained in this Order with regard to which the Permittee have any knowledge. Where Respondents have no knowledge of a particular factual allegation, Respondents shall so state, and the Respondents may deny the allegation on that basis. Any allegation of the Order not specifically denied shall be deemed admitted. 20.1.5.200.A(2)(a) NMAC.

b) Assert any affirmative defenses upon which the Respondents intend to rely. Any affirmative defense not asserted in the Answer, except a defense asserting lack of subject matter jurisdiction, shall be deemed waived. 20.1.5.200.A(2)(b) NMAC.
c) Be signed under oath or affirmation that the information contained therein is, to the best of the signer's knowledge, believed to be true and correct. 20.1.5.200.A(2)(c) NMAC.

d) Include a copy of this Order attached. 20.1.5.200.A(2)(d) NMAC.

143. The Answer and Request for Hearing shall be filed with the Hearing Clerk at the following address:

Sally Worthington, Hearing Clerk
New Mexico Environment Department
1190 Saint Francis Drive, S-2103
P.O. Box 5469
Santa Fe, New Mexico 87502

Respondents must also serve a copy of the Request for Hearing on counsel for the HWB.

VII. FINALITY OF ORDER

144. This Order shall become final unless Respondents file a Request for Hearing and Answer with the Hearing Clerk within 30 days after the date of receipt of this Order pursuant to NMSA 1978, § 74-4-10(H).

VIII. SETTLEMENT CONFERENCE

145. Whether or not Respondents request a hearing and file an Answer, Respondents may confer with the HWB regarding settlement. Settlement is encouraged and consistent with the provisions and objectives of the HWA. Please note that settlement discussions do not change or extend Respondents' 30-day deadline to file their Answer and Request for Hearing, if any, or alter compliance deadlines set forth herein. Settlement discussions may be pursued as an alternative to and simultaneously with any hearing proceedings. Respondents may appear at any settlement conference on their own behalf or they may be represented by legal counsel.

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146. Any settlement the Parties may reach shall be finalized by written settlement agreement and stipulated final order. A settlement agreement must address and resolve all issues NMED has set forth in the Order, and it shall be final and binding upon all Parties without right of appeal.

147. To explore the possibility of settlement in this matter, contact Jeffrey M. Kendall, Office of General Counsel, New Mexico Environment Department, 1190 St. Francis Drive, Suite N-4050, Santa Fe, NM 87505, (505) 827-2850.

IX. TERMINATION

148. This Order shall terminate when Respondents certify that all requirements of this Order have been met and NMED approves such certification, or when the Secretary of the Environment Department approves a settlement agreement and signs a stipulated final order.

X. COMPLIANCE WITH OTHER LAWS

149. Compliance with the requirements of this Order does not remove the obligation to comply with all other applicable laws and regulations.

It is so ORDERED.

[Signature]
Ryan Flynn
Cabinet Secretary
New Mexico Environment Department

[Date]

12/6/2014

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