NEWS RELEASE
December 6, 2014

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New Mexico Environment Department Issues Compliance Orders to U.S. Department of Energy to Protect Safety and Success of Waste Isolation Pilot Plant
Actions Follow Nine Month Long Investigation into Serious Incidents

Santa Fe — Today the New Mexico Environment Department (NMED) notified the U.S. Department of Energy (DOE) of violations of state hazardous waste permits for both the Waste Isolation Pilot Plant (WIPP) and Los Alamos National Laboratory relating to DOE’s handling of transuranic (TRU) waste that contributed to two significant incidents at WIPP earlier this year.

“New Mexico is proud of our national labs and cutting-edge scientific facilities, and we have important rules in place to protect those facilities, the people who work there, and all New Mexicans,” said Governor Susana Martinez. “The health and safety of New Mexicans will always be our priority and we have to hold federal agencies accountable for safe operations in the state of New Mexico. The federal Department of Energy is a strong partner with us, and we will continue to work with them closely to ensure their success in our state.”

Following a comprehensive and intense investigation through more than nine months, NMED found multiple violations at both WIPP and LANL and has issued two Administrative Compliance Orders (ACO).

• ACO 14-21 identifies a total of 13 violations at WIPP, resulting in civil penalties of $17,746,250.00.
• ACO 14-20 identifies a total of 24 violations at LANL, resulting in civil penalties of $36,604,649.00.

The investigation included both the February 5 underground fire and the February 14 radiological release, both at the WIPP facility. NMED’s findings confirm the existence of major procedural problems that contributed to these events, and also found a less than adequate response.
"WIPP and LANL are critical assets to our economy and communities, and it's so important that we work hard to protect their integrity and the safety of the surrounding communities," said NMED Cabinet Secretary Ryan Flynn. "These civil penalties follow a thorough investigation and are important to ensuring the continued safety and success of these important facilities. We look forward to continuing to work with the federal government to ensure the safety and success of both LANL and WIPP."

In addition to the civil penalties, NMED stipulated that federal dollars marked for environmental cleanup or operational needs at LANL and WIPP cannot be used to pay these penalties. NMED has also required that the federal agency update and submit compliance updates over the next 60 days. DOE has an opportunity to demonstrate future compliance, which could trigger penalty reductions if DOE can assure New Mexicans of safe future operations.

Attached are copies of both ACOs and notification letters to DOE.

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December 6, 2014

Jose Franco, Manager
Carlsbad Field Office
Department of Energy
P.O. Box 3090
Carlsbad, New Mexico 88221-3090

Robert L. McQuinn, Project Manager
Nuclear Waste Partnership, LLC
P.O. Box 2078
Carlsbad, New Mexico 88221-2078

RE: ADMINISTRATIVE COMPLIANCE ORDER HWB-14-21
WASTE ISOLATION PILOT PLANT
EPA I.D. NUMBER NM4890139088

Dear Messrs. Franco and McQuinn:

Enclosed is Compliance Order No. HWB-14-21 ("Order"), issued to the United States Department of Energy ("DOE") and Nuclear Waste Partnership, LLC ("NWP"; 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 4890139088 ("Permit").

New Mexico is committed to the mission of the Waste Isolation Pilot Plant ("WIPP"), as it is a key component of the DOE complex. However, New Mexico has a duty to ensure environmental regulatory compliance throughout the state to guarantee the protection of human health and the environment. Compliance actions are the mechanism by which New Mexico can deter future noncompliance and ensure the continued protection of New Mexicans who may be impacted by the operations at WIPP.

The WIPP is a testament to the ingenuity of many, especially the residents of Eddy County, New Mexico. By agreeing to host WIPP in their community, the citizens of Eddy County committed to helping the nation solve one of our most difficult problems – legacy waste disposal. In turn, the citizens of New Mexico expect and deserve WIPP to be operated and maintained with the highest standards of safety and complete transparency. While DOE has failed to meet New Mexico’s expectations in this regard, you now have an opportunity to learn from these mistakes and implement meaningful corrective actions that will ensure the long term viability of WIPP in New Mexico.
Messrs. Franco and McQuinn
December 6, 2014
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Additional compliance orders may 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

c: J. Kendall, General Counsel, NMED
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STATE OF NEW MEXICO
ENVIRONMENT DEPARTMENT

ENVIRONMENTAL HEALTH DIVISION,
HAZARDOUS WASTE BUREAU,
Complainant,
v.
UNITED STATES DEPARTMENT
OF ENERGY, and
NUCLEAR WASTE PARTNERSHIP, LLC,
Respondents.

WASTE ISOLATION PILOT PLANT
EDDY COUNTY, NEW MEXICO

COMPLIANCE ORDER NO. HWB-14-21 (CO)

ADMINISTRATIVE ORDER REQUIRING COMPLIANCE
AND ASSESSING A 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 Nuclear Waste Partnership, LLC (“NWP”; collectively, with DOE, the “Respondents”), requiring the Respondents to comply with the terms and conditions of this Order relating to the Waste Isolation Pilot Plant (“WIPP” 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 NM4890139088-TSDF (“Permit”).
I. FINDINGS

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 within the government of the State of New Mexico.

2. NMED, through the HWB of the Division, 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 disposal of defense transuranic ("TRU") mixed waste within the State of New Mexico at WIPP. TRU mixed waste is subject to RCRA.

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

7. DOE and NWP are Co-Permitees under a Treatment, Storage, and Disposal Facility ("TSDF") Permit for WIPP.

B. INVESTIGATION


10. On February 5, 2014, the Respondents reported through a DOENews Release that multiple employees were being transported to a local hospital for potential smoke inhalation. See February 5, 2014- 12:25 PM DOENews Release.

11. On February 7, 2014, the DOE Office of Environmental Management appointed an Accident Investigation Board ("AIB") to investigate the fire.

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


14. On February 15, 2014, at 8:50 AM, a particulate air filter from mine exhaust effluent air sampling Station A (before the High Efficiency Particulate Air ("HEPA") filters) was removed, sampled and analyzed. The measured analytical results indicated a release of 4,400,000 dpm ("disintegrations per minute") Alpha and 1,200,000 dpm Beta radioactive particulates, which are components of TRU mixed waste at WIPP. See Station A Filter Readings.

15. On February 15, 2014, at 8:50 AM, a particulate air filter from mine exhaust effluent air sampling Station B (after the HEPA filters) was removed, sampled, and analyzed. The measured analytical results indicated a release of 28,205 dpm Alpha and 5,877 dpm Beta radioactive
particulates, which are components of TRU mixed waste at WIPP. See Station A and B Filter Readings.

16. On February 19, 2014, a Carlsbad Environmental Monitoring and Research Center portable radiation monitor detected transuranic radionuclides approximately 0.6 miles northeast of the Facility, outside of the Facility boundary. The levels detected at this sampling station indicated a small release of radioactive particles from WIPP. See AIB Phase 1 Report, pages ES-5 and ES-6.


18. On March 10, 2014, the Respondents reported through a WIPP UPDATE Release that a damper system that is designed to allow 0.4 percent of airflow to bypass the air filtration system during filtration operations was sealed, and that before sealing the dampers, a small amount of unfiltered air was released to the atmosphere. See March 10, 2014- WIPP UPDATE: Planning Continues for Manned Entry, Damper Closure.

19. On March 12, 2014, NMED sent a letter to the Respondents requesting written justification regarding why the Contingency Plan, found in Permit Attachment D, had not yet been invoked. See March 12, 2014, NMED Request for Information, WIPP Permit Section 1.7.8.


22. On April 11, 2014, NMED was notified by the Respondents that the RCRA Contingency Plan had been implemented in relation to the Release that occurred on February 14, 2014.

23. On April 22, 2014, the 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 the breach of at least one TRU mixed waste container in the WIPP underground was the direct cause of the Release. See AIB Phase 1 Report.


25. On May 1, 2014, NWP determined there had been a potentially inadequate safety analysis based on the possibility that a container of inadequately remediated nitrate salt-bearing waste had caused the Release. See WIPP Isolation Plan, page 1.

26. 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").

27. Following publication of the ORPS Report, indicating that a nitrate salt-bearing waste container from LANL may have been the source of the Release, NMED verbally required DOE to take immediate action to isolate and secure all such nitrate salt-bearing waste containers at WIPP and LANL.

28. The suspect nitrate salt-bearing waste containers include four waste streams: LA-MHD01.001; LA-CINO1.001; LA-MIN02-V.001; and LA-MIN04-S.001. See CCP-AK-LANL-006, Rev. 13, February 10, 2014.


30. 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.

31. On May 20, 2014, to ensure the continued protection of human health and the environment, NMED issued an Administrative Order requiring the Respondents to submit to NMED a Nitrate Salt-Bearing Waste Container Isolation Plan for approval and implementation. See May 20, 2014, WIPP Administrative Order.

Proper Operation - Fire

32. The Permit provides the Respondents shall design, construct, maintain, and operate WIPP to minimize the possibility of a fire that could threaten human health or the environment. See

33. The AIB Fire Report identified "the root cause of [the] accident to be the failure of the [NWP] and the previous management and operations contractor to adequately recognize and mitigate the hazard regarding a fire in the underground." See AIB Fire Report, pages ES-3 and D-2.

34. The AIB Fire Report identified numerous contributing causes of the salt truck fire, including: salt haul truck combustible buildup; conversion of the truck’s automatic fire suppression system to manual; removal of the automatic fire detection capability; and not using fire resistant hydraulic fluid in the truck.

35. The AIB Fire Report identified numerous concerns associated with the fire not directly related to the salt haul truck, including: an ineffective emergency preparedness and response program; and an out-of-service regulator and fans; and inoperable mine phones.

36. The AIB Fire Report identified numerous additional fire safety concerns, including: insufficiently rigorous equipment inspections; large quantities of material staged haphazardly throughout the mine negatively impacting worker egress; numerous components of the mine ventilation system being out-of-service or impaired for an extended period of time; impaired alarm systems; and out of service water hydrants.

*Timely Notification - Fire*

37. The Permit provides that the Respondents shall, within five (5) calendar days from the time the Respondents become aware of the circumstances, submit a written notice to the Secretary of Environment, providing specific information regarding noncompliance that may
endanger human health or the environment. See Permit Condition 1.7.13.3, Written Notice, referencing 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.30(l)(6)(iii).

38. The February 5, 2014, fire was an event that would have necessitated written notice under Permit Condition 1.7.13.3.

39. For the five (5) day period after February 5, 2014, NMED did not receive written notice from the Respondents of the underground fire at WIPP.

**Training - Fire**

40. The Permit provides that the Respondents shall train all persons involved in the management of TRU mixed and hazardous waste in procedures relevant to the positions in which they are employed to perform their duties in a way that ensures the Facility’s compliance. See Permit Conditions: 2.8, Personnel Training; 2.8.2, Personnel Training Requirements, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.16; and F-1e, Training for Emergency Response.

41. The AIB Fire Report specified that “[t]he training and qualification of the operator was inadequate to ensure proper response to a vehicle fire.” See AIB Fire Report, pages ES-4 and D-3.

42. The AIB Fire Report discussed examples of inadequate training for the proper response to a vehicle fire: workers were unable to don personal protective equipment; fully integrated emergency exercises had not been conducted; individuals identified as coordinating the Facility’s response to fires had not received Incident Command System training; and the individual operating the salt haul truck had not received hands-on training in the use of portable fire extinguishers. See AIB Fire Report, page 26.
43. The AIB Fire Report concluded that Facility personnel did not fully follow the procedures for response to a fire in the underground due in part to "the lack of effective drills and training." See AIB Fire Report, page ES-5.

44. Facility personnel involved in the management of TRU mixed and hazardous waste were not trained in procedures relevant to the position in which they were employed and in a manner to perform their duties in a way that ensured the Facility's compliance.

**Emergency Equipment - Fire**

45. The Permit provides that the Respondents shall have an internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to Facility personnel. The internal communications system shall include, among other things, two-way communication through the public address system. See Permit Conditions: 2.10.1, Required Equipment; and 2.10.1.1, Internal Communications, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.32(a).

46. The AIB Fire Report described the extent to which the emergency alarm system failed. The evacuation alarm and associated announcement over the public address system "was not heard throughout the underground" and "[s]ome workers learned of the fire and need to evacuate through the 'chatter' on the mine phone, through co-workers, or through their supervisors." See AIB Fire Report, page ES-2.

47. The AIB Fire Report specifies that 12 of 40 mine phones were non-functional. See AIB Fire Report, page 34.

48. Facility emergency communication equipment was not fully capable of providing emergency instruction to Facility personnel.
49. The Permit provides that the Respondents shall test and maintain equipment as necessary to assure its proper operation in time of emergency. See Permit Conditions: 2.10.2, Testing and Maintenance of Equipment; and E-1a, General Inspection Requirements, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.33.

50. The AIB Fire Report identified the following equipment maintenance program inadequacies: an inoperable CAM; three fire alarm panels were impaired; three fire hydrants were either impaired or out of service; two fire water supply system valves were impaired; a pull station was impaired; and 33 emergency lights were inoperable. See AIB Fire Report, pages 34-36.

51. The AIB Fire Report concluded that, with regard to equipment, “there is a significant delta between the preventative maintenance prescribed in the service manual and what is performed” and “management has not taken prompt action to resolve longstanding deficiencies.” See AIB Fire Report, pages 36-37.

52. Emergency equipment was not fully maintained to assure its proper operation in time of emergency.

Contingency Plan Implementation - Fire

53. The Permit provides the Respondents shall immediately implement the Contingency Plan whenever there is a fire that could threaten human health or the environment. The Contingency Plan specifies that it is to be implemented any time there is a Level II or Level III incident. Level II or Level III incidents are categorized as incidents involving, among other things, evacuation for life safety. See Permit Conditions: 2.12.1, Implementation of [Contingency] Plan; D-3, [Contingency Plan] Implementation, referencing 20.4.1.500 NMAC, incorporating 40
C.F.R. § 264.51(b); and D-4a(1), *Initial Emergency Response and Alerting the RCRA Emergency Coordinator.*

54. The AIB Fire Report described the fire as "a facility evacuation in response to an actual occurrence that required time-urgent response by specialist personnel." *See AIB Fire Report,* page 25.

55. Though the fire was associated with an evacuation for life safety, the Facility Contingency Plan was not implemented.

**Proper Operation, Maintenance, and Design - Release**

56. The Permit provides that the Respondents shall design, maintain, and operate the Facility to minimize the possibility of any unplanned sudden or non-sudden release of TRU mixed waste or mixed waste constituents to air which could threaten human health or the environment. *See Permit Condition 2.1, Design and Operation of Facility,* referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.31.

57. The Permit provides that the Respondents shall operate the Facility to prevent undue exposure of personnel to hazardous waste and to prevent releases to the atmosphere. *See Permit Conditions: 2.11, Hazards Prevention,* referencing 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.14(b)(8).

58. The Permit provides that a measured release of radionuclides is an indication of a release of hazardous waste constituents. "Regardless of how [a] release occurs, the nature of the waste and the processes that generated it is such that the radioactive and hazardous components are intimately mixed. A release of one without the other is not likely...." *See Permit Condition G3-3a, Nature of the Hazardous Waste Portion of TRU Mixed Waste.*
59. The Permit provides items that are radiologically contaminated are also assumed to be contaminated with the hazardous wastes that are in the container involved in the spill or release. See Permit Condition A1-1d(2), CH TRU Mixed Waste Handling.

60. The AIB Phase I Report provided the following examples of undue exposure of personnel to hazardous waste and releases to the atmosphere: the off-site detection of americium and plutonium; and 21 individuals identified as testing positive for low level amounts of internal contamination. See AIB Phase I Report.

61. The AIB Phase I Report provided the following examples of maintenance procedures that were not protective of human health and the environment: the condition of critical equipment and components, including continuous air monitors, ventilation dampers, fans, sensors, and the primary system status display was degraded. See AIB Phase I Report, page ES-7.

62. The AIB Phase I Report provided the following example of a design feature that was not protective of human health and the environment: “a measurable portion [of the Release] bypassed the HEPA filters via design leakage through two ventilation system dampers and was discharged directly to the environment from an exhaust duct.” See AIB Phase I Report, page ES-1.

63. The AIB determined that “this damper selection is inappropriate for isolation dampers that are part of a confinement barrier.” See AIB Phase I Report, page 104.

64. The AIB Phase I Report provided the following examples of operational practices that were not protective of human health and the environment: the filter bypass airflow, i.e., damper leakage, had not been tested; standards specify that dampers be leak tested every two years; and
monitoring damper leakage is essential to maintaining isolation integrity. See AIB Phase I Report, page 104.

65. The evidence provided in the AIB Phase I Report indicates that the Respondents did not design, maintain, or operate the Facility in a manner ensuring protection of human health and the environment and the prevention of a release.

Timely Notification - Release

66. The Permit provides that the Respondents shall report orally to the Secretary within 24 hours from the time the Respondents become aware of the circumstances of any noncompliance which may endanger human health or the environment, including any information of a release or discharge of TRU mixed or hazardous waste, which could threaten the environment or human health outside the Facility. See Permit Conditions: 1.7.13.1.ii, Oral Report, referencing 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.30(l)(6)(i); and 1.7.13.2, Description of Occurrence, referencing 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.30(l)(6)(ii).

67. The Permit provides that the Respondents shall submit a written notice within five (5) calendar days of the time the Respondents become aware of the circumstances. See Permit Conditions: 1.7.13.3, Written Notice, referencing 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.30(l)(6)(iii); and 1.7.13.2. Description of Occurrence, referencing 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.30(l)(6)(ii).

68. On February 15, 2014, the Respondents reported through a DOENews Release, that operations personnel were responding to a possible radiological event at WIPP. See February 15, 2014- 2:49 PM DOENews Release.
69. On February 19, 2014, the Respondents verbally informed NMED of the Release, and that Station B filter readings taken on February 15, 2014, indicated the Release escaped into the atmosphere past the HEPA filtration system.

70. The Respondents did not notify NMED orally within 24 hours of becoming aware of the Release which threatened human health and the environment outside the Facility.

71. The Respondents did not notify NMED in writing within five (5) days of the Release.

**Contingency Plan Implementation - Release**

72. The Permit provides that the Respondents shall immediately implement the Contingency Plan found in Permit Attachment D whenever there is a release of TRU mixed or hazardous waste, or hazardous waste constituents, which could threaten human health or the environment, as required by 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.51(b). See Permit Conditions: 2.12.1, *Implementation of [Contingency] Plan; D-3, Implementation*, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.51(b); and D-4a(1), *Initial Emergency Response and Alerting the RCRA Emergency Coordinator*.

73. The Contingency Plan specifies that it is to be implemented any time there is a Level II or Level III incident. See Permit Conditions: D-3, *[Contingency Plan] Implementation, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.51(b); and D-4a(1), Initial Emergency Response and Alerting the RCRA Emergency Coordinator*.

74. The AIB Phase 1 Report stated that the “RCRA Contingency Plan was not implemented.” See AIB Phase 1 Report, page 51.

75. The AIB Phase 1 Report stated that the “RCRA Contingency Plan Incident Level II definition should have been triggered.” See AIB Phase 1 Report, page 58.
76. The AIB Phase 1 Report concluded that NWP’s implementation of DOE’s Comprehensive Emergency Management System was ineffective. “Personnel did not adequately recognize, categorize, or classify the emergency and did not implement adequate protective actions in a timely manner.” See AIB Phase 1 Report, page ES-7.

77. The AIB Phase 1 Report concluded that NWP must correct its activation, notification, classification and categorization protocols to be in full compliance with the Permit Contingency Plan. See AIB Phase 1 Report, page ES-12, JONs 16 and 18.

78. The Respondents did not immediately implement the Contingency Plan as required by the Permit after the Release, instead electing to invoke the Contingency Plan on April 11, 2014.

Accepting, Managing, Storing, Disposing Prohibited Wastes

79. The Permit provides that the Respondents shall not accept, manage, store, or dispose of ignitable waste within the permitted units. See Permit Conditions: Attachment B, Application Part A; 2.9, General Requirements for Handling Ignitable, Corrosive, Reactive, or Incompatible Wastes, referencing 20.4.1.200 NMAC, incorporating 40 C.F.R. §§ 261.21 and 261.22, and referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. Part 264, Appendix V; 2.3.1, Waste Analysis Plan, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.13; 2.3.3, Treatment, Storage, and Disposal Facility Waste Acceptance Criteria (TSDF-WAC); 2.3.3.7, Ignitable, Corrosive, and Reactive Wastes; 2.3.4, Permitted TRU Mixed Wastes; 3.2.1.3, Hazardous Waste Numbers; C-1b, Waste Summary Category Groups and Hazardous Waste Accepted at the WIPP Facility; and C-1c, Waste Prohibited at the WIPP Facility.

81. On July 30, 2014, the Respondents notified NMED of the provisional application of HWN D001 to 368 nitrate salt-bearing waste containers in the LA-MIN02-V.001 waste stream, including previously labeled container LA00000068660, disposed in the underground. See July 30, 2014, Written Notice Regarding Application of EPA Hazardous Waste Number D001 to Some Nitrate Salt Bearing Containers.

82. On July 30, 2014, LANL notified NMED that it had assigned HWN D001 for ignitibility to 57 remediated nitrate salt-bearing waste containers and to 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.

83. In a letter dated September 5, 2014, LANL informed NMED that it had assigned HWN D001 for ignitibility 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 zeolite-based absorbents recommended by the LANL Difficult Waste Team on May 8, 2012. See LANL’s September 5, 2014, Response to NMED’s Information Request Regarding LANL’s Nitrate Salt-Bearing Waste Container Isolation Plan, pages 3-4.

84. In a letter dated September 5, 2014, in Response to an NMED request for clarification on the application of HWN D001 to certain nitrate salt-bearing waste containers, the Respondents stated that “[t]he LA-MIN02-V.001 AK documentation clearly indicates that nitrate salts are present in the waste. Nitrate salts are classified as a Hazard Class 5.1 DOT oxidizer per 49 CFR
§ 173.21. Additionally 40 CFR §261.21(a)(4) states that a solid waste exhibits the characteristic of ignitability if a representative sample of the waste is an oxidizer and defines an oxidizer as 'a substance such as ... a nitrate, that yields oxygen readily to stimulate the combustion of organic matter.' [D]ocumentation obtained during the AK re-evaluation indicates that an organic absorbent ... was used in the repackaging of nitrate salts, and the proportions used to remediate the nitrate salts were not clearly documented during repackaging. Therefore, there is no assurance that potential for the characteristic of ignitability (DOO1) was mitigated.” See Response to D001 RFI, page 6.

85. The nitrate salt-bearing waste containers are in waste streams LA-MHD01.001, LA-CIN01.001, LA-MIN02-V.001, and LA-MIN04-S.001. See CCP-AK-LANL-006, Rev. 13, February 10, 2014, pages 16-27; and Nitrate Suspect WIPP Containers (spreadsheet), submitted by the Respondents on September 30, 2014.

86. The Respondents accepted 508 nitrate salt-bearing waste containers from waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001. See Nitrate Suspect WIPP Containers (spreadsheet), submitted by the Respondents on September 30, 2014, and September 30, 2014, LANL Response to the August 26, 2014, Request for Information, Attachments 2 and 3.

87. Based on evidence and information provided by the Respondents and LANL, nitrate salt-bearing waste containers in waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001 should be assigned HWN D001 for ignitability and therefore should not have been accepted by WIPP.
Incompatible Waste - Absorbents

88. The Permit provides that the Respondents shall not accept, manage, store, or dispose incompatible waste within the permitted units. See Permit Conditions: 2.9, General Requirements for Handling Ignitable, Corrosive, Reactive, or Incompatible Wastes, referencing 20.4.1.200 NMAC, incorporating 40 C.F.R. §§ 261.21 and 261.22, and referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. Part 264, Appendix V; 2.3.1, Waste Analysis Plan, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.13; 2.3.3, Treatment, Storage, and Disposal Facility Waste Acceptance Criteria (TSDF-WAC); 2.3.3.4, Chemical Incompatibility; and C-1c, Waste Prohibited at the WIPP Facility.

89. 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.

90. U.S. Department of Transportation regulations define 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.

91. The nitrate salt-bearing waste containers are in waste streams LA-MHD01.001, LA-CIN01.001, LA-MIN02-V.001, and LA-MIN04-S.001. See CCP-AK-LANL-006, Rev. 13, February 10, 2014, pages 16-27; and Nitrate Suspect WIPP Containers (spreadsheet), submitted by the Respondents on September 30, 2014.

92. In a letter dated September 5, 2014, LANL informed NMED that they had assigned D001 for ignitibility 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 D001, and that the nitrate salt-bearing waste containers could be

93. On September 5, 2014, the Respondents notified NMED that on May 2, 2014, the Respondents were verbally notified by LANL of the use of an organic absorbent to remediate nitrate salt-bearing waste containers, a process that combined incompatible materials. See Response to D001 RFI, page 4.

94. The organic absorbents LANL used are polymers comprised of cellulose or polyacrylate, which are combustible materials and contain the monomers 1,6-anhydro-beta-D-glucose and sodium acrylate, respectively, which are known to react readily with nitrate and other strong oxidizers. See Material Safety Data Sheet (MSDS) for 1,6-anhydro-beta-D-glucose, 99%, Sigma-Aldrich; MSDS for sodium acrylate, 97%, Sigma-Aldrich.

95. WIPP accepted 503 nitrate salt-bearing waste containers that contained organic absorbents added by LANL prior to shipment. See September 30, 2014, Response to the August 26, 2014 Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3.

96. The organic absorbents and nitrate salts contained in the 503 containers were incompatible wastes that could lead to fire, explosion or violent reaction, and should not have been accepted by the Respondents.

**Incompatible Waste - Neutralizers**

97. In a process that combined incompatible materials, LANL added organic neutralizers to liquid from at least 208 nitrate salt-bearing waste containers during remediation and repackaging. This neutralized liquid was then absorbed with an organic absorbent and placed into containers that were shipped to WIPP. See September 30, 2014, Response to the August 26, 2014, Request
for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3.

98. A component of one of the organic neutralizers used was triethanolamine, which is incompatible with strong oxidizers. See MSDS for triethanolamine 99%, Dow Chemical Company; MSDS for triethanolamine 97%, Fisher Scientific.

99. The Respondents accepted 503 nitrate salt-bearing waste containers that contained organic absorbent, including at least 208 containers that contained the organic neutralizer that was added by LANL prior to shipment. See September 30, 2014, Response to the August 26, 2014, Request for Information, Treatment of Waste without a Permit and Failure to Reevaluate Acceptable Knowledge, Attachments 2 and 3.

100. Based on the information provided by the Respondents and LANL, the Respondents accepted, managed, stored, and disposed of 208 containers at WIPP that contained organic neutralizers and nitrate salts, which are incompatible wastes.

Failure to Adequately Characterize Waste

101. The Permit requires the Respondents to verify the completeness and accuracy of the Waste Stream Profile Form, including the appropriate designation of EPA HWNs. See Permit Condition C-5a(2), Examination of the Waste Stream Profile Form and Container Data Checks.

102. The Respondents did not verify the designated EPA HWN in the Waste Stream Profile Forms associated waste streams LA-MIN02-V.001, LA-CIN01.001, LA-MIN04-S.001, and LA-MHD01.001. Had the Respondents verified the applicability of HWN D001 in the Waste Stream Profile Forms for these wastes, the waste would not have been shipped to WIPP.
II. VIOLATIONS

103. The Permit provides that the Respondents shall comply with all conditions of the Permit. Any Permit noncompliance constitutes a violation of RCRA and/or the HWA and is grounds for enforcement action; for Permit modification, suspension, or revocation; or for denial of a Permit modification or renewal application. See Permit Condition 1.7.1, *Duty to Comply*, referencing 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.30(a).

104. The Permit provides that the Respondent shall, in the event of noncompliance with the Permit, take all reasonable steps to minimize releases to the environment and to carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment. See Permit Condition 1.7.6, *Duty to Mitigate*, referencing 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.30(d).

105. The Permit provides that the Respondents shall maintain and operate WIPP to minimize the possibility of a fire or unplanned release of TRU mixed waste or mixed waste constituents to environmental media which could threaten human health or the environment. See Permit Condition 2.1, *Design and Operation of Facility*, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.31.

106. The Respondents' failure to maintain and operate WIPP to minimize the possibility of a fire which could threaten human health or the environment is a violation of Permit Condition 2.1, *Design and Operation of the Facility*, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.31.

107. The Respondents' failure to submit a written notice concerning the fire within five (5) calendar days of the time the Respondents became aware of the circumstances is a violation of Permit Conditions: 1.7.13.3, *Written Notice*, referencing 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.30(a).


109. The Respondents' failure to have an internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to Facility personnel is a violation of Permit Conditions: 2.10.1, *Required Equipment*; and 2.10.1.1, *Internal Communications*, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.32(a).

110. The Respondents' failure to test and maintain the equipment specified in Permit Condition 2.10.1, as necessary, to assure its proper operation in time of emergency, as specified in Permit Attachment E, is a violation of Permit Conditions: 2.10.2, *Testing and Maintenance of Equipment*; and E-1a, *General Inspection Requirements*, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.33.

111. The Respondents' failure to immediately implement the Contingency Plan found in Permit Attachment D when there was a fire that threatened human health or the environment is a violation of Permit Conditions: 2.12.1, *Implementation of [Contingency] Plan*, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.51(b); D-3, *Implementation*, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.51(b); and D-4a(1), *Initial Emergency Response and Alerting the RCRA Emergency Coordinator*.

112. The Respondents' failure to design, maintain, and operate the Facility in a manner to minimize the possibility of a release to the atmosphere of TRU mixed waste or mixed waste
constituents and to prevent undue exposure of personnel to hazardous waste is a violation of Permit Conditions: 2.1, *Design and Operation of Facility*, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.31; and 2.11, *Hazards Prevention*, referencing 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.14(b)(8).


114. The Respondents' failure to submit a written notice regarding the Release within five (5) calendar days of the time the Respondents became aware of the circumstances is a violation of Permit Conditions: 1.7.13.3, *Written Notice*, referencing 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.30(l)(6)(iii); and 1.7.13.2, *Description of Occurrence*, referencing 20.4.1.900 NMAC, incorporating 40 C.F.R. § 270.30(l)(6)(ii).

115. The Respondents' failure to immediately implement the Contingency Plan found in Permit Attachment D when there was a release of TRU mixed or hazardous waste or hazardous waste constituents which threatened human health or the environment, is a violation of Permit Conditions: 2.12.1, *Implementation of [Contingency] Plan*, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.51(b); D-3, *Implementation*, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.51(b); and D-4a(1), *Initial Emergency Response and Alerting the RCRA Emergency Coordinator*.

116. The Respondents' acceptance, management, storage, and disposal of 508 containers of ignitable wastes is a violation of Permit Conditions: Attachment B, (Part A Application); 2.9,
General Requirements for Handling Ignitable, Corrosive, Reactive, or Incompatible Wastes, referencing 20.4.1.200 NMAC, incorporating 40 C.F.R. §§ 261.21 and 261.22, and referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. Part 264, Appendix V; 2.3.1, Waste Analysis Plan, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.13; 2.3.3, Treatment, Storage, and Disposal Facility Waste Acceptance Criteria (TSDF-WAC); 2.3.3.7, Ignitable, Corrosive, and Reactive Wastes; 2.3.4, Permitted TRU Mixed Wastes; 3.2.1.3, Hazardous Waste Numbers; C-1b, Waste Summary Category Groups and Hazardous Waste Accepted at the WIPP Facility; and C-1c, Waste Prohibited at the WIPP Facility.

117. The Respondents' acceptance, management, storage, and disposal of 503 containers of incompatible wastes is a violation of Permit Conditions: 2.9, General Requirements for Handling Ignitable, Corrosive, Reactive, or Incompatible Wastes, referencing 20.4.1.200 NMAC, incorporating 40 C.F.R. §§ 261.21 and 261.22, and referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. Part 264, Appendix V; 2.3.1, Waste Analysis Plan, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.13; 2.3.3, Treatment, Storage, and Disposal Facility Waste Acceptance Criteria (TSDF-WAC); 2.3.3.4, Chemical Incompatibility; and C-1c, Waste Prohibited at the WIPP Facility.

118. The Respondents' failure to verify the completeness and accuracy of the Waste Stream Profile Form is a violation of Permit Condition C-5a(2), Examination of the Waste Stream Profile Form and Container Data Checks.

III. SCHEDULE OF COMPLIANCE

119. No later than 60 days after this Order becomes final, the Respondents shall submit to NMED a written report describing actions the Respondents have taken to prevent any recurrence of violations described herein and changes to associated procedures and policies.
120. No later than 60 days after this Order becomes final, the Respondents shall provide to NMED a summary of potential modifications to procedural and non-procedural documents necessary to prevent any recurrence of violations described herein, including but not limited to:
   a) Procedures that ensure that the Respondents develop or revise methodologies to ensure that documentation related to the Permit Conditions cited within this Order (e.g., Acceptable Knowledge documents, changes in waste management procedures, waste generation, waste treatment, waste packaging, waste repackaging, waste remediation, waste stream delineation, and waste characterization procedures) is accurate, sufficient, and up-to-date. The procedures shall address the implementation of a series of reviews and communications within and between appropriate groups (e.g., Respondents, Central Characterization Program (“CCP”), Difficult Waste Team, subcontractors, generator sites, and site subcontractors);
   b) Procedures that ensure the Respondents correct deficiencies associated with emergency communication equipment, including the configuration and adequacy of the equipment (e.g., alarms, public address system);
   c) Procedures that ensure the Respondents thoroughly train Facility personnel in managing a broad range of emergency responses.

121. No later than 60 days after this Order becomes final, the Respondents shall revise and submit to NMED the Interface Agreements between CCP and all generator sites to ensure that the appropriate organizations and subject matter experts communicate effectively and timely regarding changes in waste management procedures, waste generation, waste treatment, waste packaging, waste repackaging, waste remediation, waste stream delineation, and waste characterization procedures.
122. All submissions to NMED related to this Order shall be posted in the Information Repository within five (5) working days of submission to NMED.

123. The Respondents shall submit all required information to NMED via electronic mail and hard copy to the following addresses:

Bureau Chief
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87508-6303

AND

Division Director
Environmental Health Division
Harold Runnels Building
1190 Saint Francis Drive, PO Box 5469
Santa Fe, New Mexico 87502-5469

IV. CIVIL PENALTY

124. Pursuant to the Sections 74-4-10(B) and 74-4-12 of the HWA, the 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 $17,746,250.00 against the Respondents for the violations described in Section II. The penalty amount is calculated pursuant to NMED's HWB Civil Penalty Policy.

125. 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
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87508-6303
V. NOTICE OF POTENTIAL ADDITIONAL PENALTIES

126. If the 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.

127. 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 Act or any condition of the Permit. NMED retains the right to assess in any subsequent action or proceeding any violation of any current or future existing condition of the Permit 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

128. Pursuant to Section 74-4-10(H) of the HWA, and NMED’s Adjudicatory Procedures, 20.1.5.200 NMAC, the 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 Respondents have any knowledge. Where the Respondents have no knowledge of a particular factual allegation, the 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.

129. 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 St. 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

130. This Order shall become final unless the 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, Section 74-4-10(H).

VIII. SETTLEMENT CONFERENCE

131. Whether or not the Respondents request a hearing and file an Answer, the Respondents may confer with the HWB concerning settlement. Settlement is encouraged and consistent with the provisions and objectives of the HWA. Settlement discussions do not extend the 30-day deadline for filing the Respondents' Answer and Request for Hearing, or alter the deadlines for compliance with this Order. Settlement discussions may be pursued as an alternative to and
simultaneously with any hearing proceedings. The Respondents may appear at the settlement conference on their own behalf or may be represented by legal counsel.

132. 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.

133. 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) 827-2750.

IX. TERMINATION

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

X. COMPLIANCE WITH OTHER LAWS

135. 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.

Ryan Flynn
Cabinet Secretary
New Mexico Environment Department

Date 12/6/2014
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
J. Hower, NMED OOGC
G. Lauer, NMED OOGC
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").
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.
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 I Report, page ES-1.

17. On April 22, 2014, the DOE Office of Environmental Management Accident Investigation Board ("AIB") released the Phase I Accident Investigation Report titled, *Radiological Release Event at the Waste Isolation Pilot Plant on February 14, 2014* ("AIB Phase I 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 I Report.

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)(1).

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.

55. The Respondents did not promptly report to NMED that they had failed to submit
relevant facts in the Permit Application. Respondents treated hazardous waste at TA-50-69 from
October 11, 2011, through April 24, 2014, but did not notify NMED 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.

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(l)(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(l)(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 D901, 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
Container Isolation Plan, pages 3-4; see also 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.

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.


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.
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

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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.

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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.

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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.
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.

Ryan Flynn
Cabinet Secretary
New Mexico Environment Department

2/6/2019
Date