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ENVIRONMENT DEPARTMENT

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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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.

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,

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
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G. Hellstrom, Legal Counsel, DOE CBFO
D. Cook, General Counsel, NWP

STATE OF NEW MEXICO
ENVIRONMENT DEPARTMENT

ENVIRONMENTAL HEALTH DIVISION, HAZARDOUS WASTE BUREAU,	)	**COMPLIANCE ORDER NO. HWB-14-21 (CO)**
Complainant,	)	
v.	)	
UNITED STATES DEPARTMENT OF ENERGY, and NUCLEAR WASTE PARTNERSHIP, LLC,	)	
Respondents.	)	
WASTE ISOLATION PILOT PLANT EDDY COUNTY, NEW MEXICO	)	

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.

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

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-Permittees under a Treatment, Storage, and Disposal Facility ("TSDF") Permit for WIPP.

B. INVESTIGATION

8. On February 5, 2014, an underground fire involving a salt haul truck occurred at WIPP. *See* AIB Fire Report, page ES-1.

9. On February 5, 2014, the Respondents, through a DOENews Release, reported that emergency response services had been activated at WIPP. *See* February 5, 2014- 11:43 AM DOENews Release.

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.

13. On February 14, 2014, at 11:14 PM, a continuous air monitor ("CAM") at the Facility detected airborne radiation in the underground. *See* WIPP Isolation Plan, page 1, submitted to NMED on May 30, 2014.

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.

17. On February 19, 2014, DOE 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.

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.

20. On March 13, 2014, the AIB released its report titled *Underground Salt Haul Truck Fire at the Waste Isolation Pilot Plant February 5, 2014* ("AIB Fire Report") regarding the fire, in which it concluded that the "accident was preventable." *See* AIB Fire Report, page ES-1.

21. On April 11, 2014, NMED sent the Respondents a follow up letter questioning their rationale for the continued delay in invoking the Contingency Plan. *See* April 11, 2014, NMED Follow Up to March 12, 2014, NMED Request for Information.

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.

24. On April 28, 2014, the Respondents filed a report with NMED documenting implementation of the Contingency Plan in relation to the Release. *See* April 28, 2014, Implementation of Contingency Plan 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-CIN01.001; LA-MIN02-V.001; and LA-MIN04-S.001. *See* CCP-AK-LANL-006, Rev. 13, February 10, 2014.

29. On May 16, 2014, DOE released photographic evidence indicating one of LANL's nitrate salt-bearing waste containers emplaced underground at WIPP had "a cracked lid and show[ed] evidence of heat damage." *See* WIPP Update: May 16, 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*

Permit Condition 2.1, *Design and Operation of the Facility*, referencing 20.4.1.500 NMAC, incorporating 40 C.F.R. § 264.31.

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 1 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 1 Report.

61. The AIB Phase 1 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 1 Report, page ES-7.

62. The AIB Phase 1 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 1 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 1 Report, page 104.

64. The AIB Phase 1 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 1 Report, page 104.

65. The evidence provided in the AIB Phase 1 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.*

80. On July 7, 2014, the Respondents notified NMED that EPA Hazardous Waste Number ("HWN") D001 (ignitability characteristic) had been added to container LA00000068660. *See* July 7, 2014, Supplement-Implementation of Contingency Plan Report.

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 (D001) 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

classified as oxidizers. *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.

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(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).

108. The Respondents' failure to conduct adequate personnel training is a violation of 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.*

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).

113. The Respondents' failure to provide oral notification to NMED within 24 hours of becoming aware of the Release is a violation of Permit Conditions: 1.7.13.1.ii, *Oral Reporting*, 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).

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

12/6/2014
Date